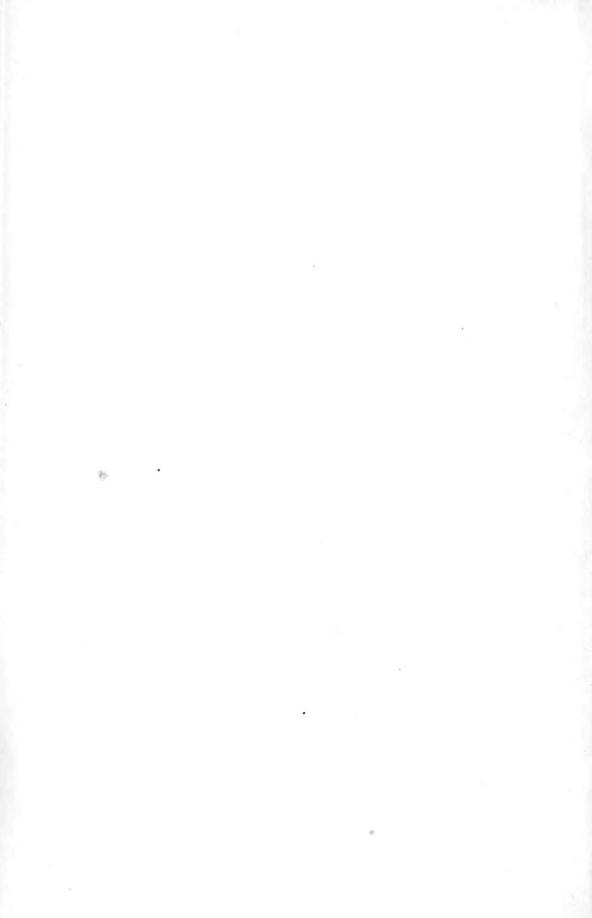
# ANNUAL REPORT OF THE CITY ENGINEER



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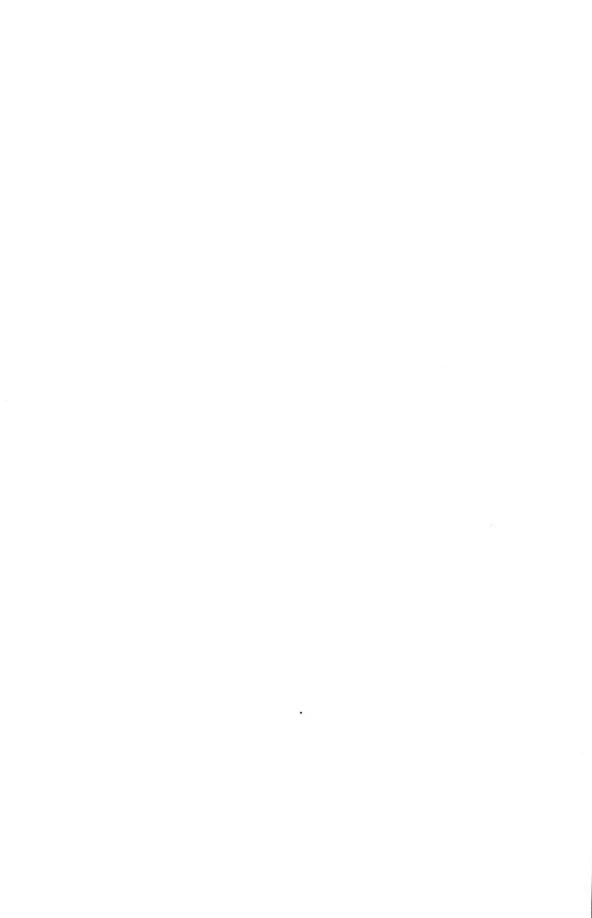
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Mr.

WITH MR. RUST'S COMPLIMENTS.





# ANNUAL REPORT

OF THE

# CITY ENGINEER

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# **TORONTO**

FOR

1905



80820

# TORONTO:

The Carswell Co., Limited, City Printers, 28-30 Adelaide St. East 1906.



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# TORONTO.

TOPOGRAPHY.—The City of Toronto is situated upon the northern shore of Lake Ontario, about forty miles easterly of its western terminus. It lies in latitude 43° 39′ 10″ north, longitude 79° 23′ west, on a plateau gently ascending north for a distance of three miles, where an altitude of about 220 feet above the lake level is reached. It extends about eight miles along the lake, and is generally level, with slight depressions at points where minor water courses previously existed. The harbor is formed in front of the City by a sandy island, which lies to the south, at a distance of about a mile and a half.

Toronto is the capital of the Province of Ontario, and in it are situated the Provincial Parliament Buildings and Government House, the residence of the Lieutenant-Governor of the Province.

### STATISTICS.

AREA.—The area within the City limits, not including the portions of the City land covered by water, is 17.81 square miles.

POPULATION.—The population of the City, according to the census taken by the City Police at the end of 1905, was about 262,749.

PUBLIC STREETS AND LANES.—Within the City limits there are 269 miles of streets and 85 miles of lanes, of which 206.89 miles are paved, and 62.11 miles unpaved.

# PAVEMENTS AND ROADWAYS .-

Asphalt	56.29	miles
Cedar block	48.83	• •
Brick	17.14	"
Macadam		
Wood on concrete		
Stone and scoria block		
Gravel		6.6
Bitulithic	3.22	66
Tar macadam		60

# SIDEWALKS.—

Stone flag	1.821	miles
Conerete		"
Briek	3.233	"
Wood	240.000	44

Sewerage.—The City is drained by what is known as the combined system of sewers, and there are 245.11 miles of sewers.

Water Works.—The Water Works system is owned and operated by the City, the supply being obtained from Lake Ontario through a 6-ft, steel conduit laid across Toronto Island to a crib near Hanlan's Point, and from thence through a 4-ft, steel pipe, and a 3-ft, cast iron pipe laid under Toronto Bay to the Main Pumping Station on the water front, the water being pumped through the City mains, the surplus going to the Reservoir situated north of the north City limits. Cost of system to date, about \$4,000,000.

# STATIONS AND ENGINES.—

# Main Pumping Station.

$N_0$	. 1	Engine,	4,000,000	gals.	capacity	, 24 hours.
4.6	$\overline{2}$		8,000,000	"	"	"
	4	"	10,000,000	"	"	"
44	5	"	10,000,000	66	66	"
66	6	4.0	15.000.000	"	under co	nstruction.

High Level Pumping Station.—Two engines with a total capacity of 6,000,000 gallons in 24 hours.

Island Pumping Station.—One engine 500,000 gallons capacity in 24 hours.

286.619 miles of water mains.

54,042 water services.

3,335 street hydrants.

2,657 valves.

2,200 meters in use.

Water Rates.—Average schedule,  $2\frac{1}{2}$  cents per 1,000 gallons and by meter, 10 cents per 1,000 gallons.

45,000 water takers.

Pressure—Domestic and fire, 75 to 90 lbs.

Average quantity pumped in 24 hours, 25,136,253 gallons.

Water consumed annually, 9,174,732,461 gallons. Fuel used—soft coal screenings. Cost of fuel during 1905, \$49,644.31.		
General receipts, constructing and moving services, etc. Revenue collected in 1905 by schedule rate	\$ 17,865 190,857 177,970	08
for water used	76,679	00
Total	\$ 463,372	35
Operating expenses, including cost of collecting rates and debt charges	\$ 461,519 473,635	
Total	\$ 935,155	<b>5</b> 5

# FIRE PROTECTION.—

- 211 officers and men in brigade.
  - 76 horses.
- 60 pieces of apparatus for various purposes.
- 3,335 fire hydrants.
  - 18 fire stations.
    - 7 steam fire engines.

# POLICE PROTECTION.—

- 325 officers and men.
  - 1 Squad of 9 mounted men and one sergeant.
  - 3 patrol wagons.
  - 1 prison van.
  - 1 headquarters and 7 stations.
  - 81 patrol signal boxes.

MILITARY.—There are two regular corps stationed in the City (one mounted and one infantry), at Stanley Barracks, near the site of old Fort Rouille, and five militia corps (two mounted and three infantry), all of which have first-class bands and the use of well-equipped and commodious Armonries.

LIGHTING.—There are 3 lighting companies doing business in the City. The Consumers' Gas Co. have 313 miles of mains, and 42.958 consumers. Carbon Light & Power Company have 993 street lights. Toronto Electric Light Company have 1,320 street electric are lights, 900 private business are lights, about 170,000 private business incandescent electric lights, and also 990 miles of overhead and underground wire, and 65 miles of underground conduit.

TELEPHONE AND TELEGRAPH SERVICE.—The Bell Telephone Company is the only company doing business in the City. They have 14.500 telephones in use, 14,000 miles of overhead, 30,000 miles of underground wires, 20 miles of underground conduit, and 165 miles of ducts.

There are two telegraph companies doing business in the City, the Great North-Western Telegraph Company, with 70 sets of instruments and 250 miles of overhead wires; and the Canadian Pacific Railway Telegraph Company.

PUBLIC PARKS.—The Public Parks of the City are under the control of the City Council. There are 26 public parks, having a total area of about 1,584 acres.

EDUCATION.—The educational system is under the direction of the Board of Education and the Separate School Board. There are 59 public schools, having a total of 674 rooms, with a staff of 725 principals and teachers. Three collegiate institutes and 1 technical high school with a staff of 68 principals and teachers. Eighteen separate schools with a staff of 99 principals and teachers.

- 2 Industrial Schools (Protestant.)
- 1 Industrial School (R. C.)
- 30 Colleges, Seminaries and Pay Schools.
  - 1 Technical School.
  - 5 Universities.
  - 3 Cathedrals of all denominations.
- 216 Churches of all denominations.
  - 4 Synagogues and several Jewish Churches.
  - 48 Missions.
  - 5 Mission Training Schools.
  - 9 Convents.

Public Library.—There is one Central Reference and Circulation Public Library, and six Circulation Libraries, all under the control of the Public Library Board. There are 478,614 volumes in circulation.

# Public Institutions.—

- 62 Hospitals, Asylums and Public Homes.
  - 3 Institutions for destitute and criminal classes.

Law.—Toronto is the centre of the Law System of the Province of Ontario, having 27 Law Courts within its limits.

# AMUSEMENTS .-

- 6 Theatres.
- 22 Music and Concert Halls

Zoological Gardens.

238 Public Buildings, Halls, etc.

# PUBLIC ACCOMMODATION.—

184 Hotels.

2,600 Boarding Houses.

RAILWAYS.—There are two railway companies whose systems enter Toronto, namely: the Grand Trunk Railway, with about 85 miles of track laid in the City limits.

The Canadian Pacific Railway Company, with about 31 miles of tracks laid in the City limits.

- 94 Passenger trains enter and leave the City daily.
- 180 Freight trains enter and leave the City daily.

The Toronto Railway Company has the exclusive franchise for operating a street railway system within the City limits. They have 94.692 miles of tracks, about 305 cars in operation, and carried 67,881,688 passengers during 1905.

# Business.—

- 6 daily newspapers: 49 weekly; 20 semi-monthly; 76 monthly, and 8 quarterly newspapers and periodicals; two directory companies.
  - 5 Public markets.
  - 36 Banks, not including branches.
  - 880 Factories and manufactories.
  - 376 Wholesale houses.
    - 5 Departmental stores.
  - 6,600 Miscellaneous business companies, corporation and stores.

# SANITATION.

Street Cleaning, Watering and Scavenging.—A modern and complete system of street cleaning, watering and scavenging is owned and operated by the city.

The supervision of the sanitary requirements of the City is under the control of the Local Board of Health.

The foregoing brief review of Toronto is annually compiled by

GEO. J. CASTLE,

Secretary to City Engineer.

# PAST CITY ENGINEERS OF TORONTO.—

1840-1842, Thomas Young.

1843-1852, John G. Howard.

1853, William Thomas.

1854, John G. Howard.

1855, William Kingsford.

1856, Thomas H. Harrison.

1857-1858, Thomas Booth.

1859-1860, Alfred Brunel.

1861-1870, J. H. Bennett.

1871-Oct., 1875, Chas. W. Johnston.

Oct. 1875-July, 1880, Frank Shanly.

Sept. 1880-July, 1883, R. J. Brough.

Oct. 1883-1889, Charles Sproatt.

1890-Sept., 1891, W. T. Jennings.

Sept. 1891-May, 1892, Granville C. Cunningham.

May, 1892-Jan., 1898, E. H. Keating.

# ANNUAL REPORT

OF THE

# CITY ENGINEER

OF THE

# CITY OF TORONTO

# FOR THE YEAR 1905.

CITY ENGINEER'S OFFICE,
Toronto, December 31st, 1905.

To His Worship the Mayor and Members of the Conneil of the Corporation of the City of Toronto:

GENTLEMEN.—In compliance with By-law No. 2534, I have the honor to lay before you the Annual Report of the Department for the year ending 31st December, 1905, setting forth the various works carried out during the year, with details of cost of construction, and suggestions and recommendations as to new works and improvements required.

# OFFICIAL STAFF.

The following is a list of the chief officials of the Department:

City Engineer and Chief Engineer and Manager of the Water Works	Charles H. Rust, M. Can. Soc. C.E., M. Am. Soc. C. E.
Deputy City Engineer	
Asst. Engineer	W.M.Maephail, M.Can.Soc.C.E.
Asst. Engineer (resigned June 1st)	W. A. Clement, M. Can. Soc. C. E.
Asst. Engineer (appointed June 1st)	J. D. Shields.
Street Commissioner (transf'd Med. H'lth Dept.)	John Jones.
Asst. Street Commissioner (resigned July 1)	Wm. J. Evans.
Accountant	Wm. McCartney.
Chief Clerk	E. P. Roden.
Secretary Committee on Works	A. H. Clarke.
Secretary to City Engineer	Geo. J. Castle.
Chief Engineer Main Pumping Station	Alex. McRae.
Chief Engineer High Level Pumping Station	Thos. Walsh.
Foreman of Water Works Construction	Edward Foley.

### FINANCIAL.

During the year the total expenditure of the Department, including Water Works, was \$1.889,718.92, which was divided as follows:

•	
Water Works	\$662,380 11
General and special works	
Street railway track allowance pavements	2.561 27
Local improvements (including street exten-	
sions)	584.682 42
Departmental and sundry accounts	75,435 88
Island works	10,486 80
Total	21 220 712 03

Expenditure upon local improvements was divided as follows:

Roadways	\$372,164 21
Concrete	152.437.75
Brick walks	181 37
Plank walks	5,218 56
Sewers	50,508 42
Street openings and extensions	4.172 11
-	

Total......\$584,682 42

This is an increase of \$58,260.29 over last year, and is the largest amount expended by this Department on local improvement works in any one year.

On July 17th a By-law was passed transferring the street cleaning, street watering, and collection of garbage to the Medical Health Department. This work was formerly in charge of the Street Commissioner, who also repaired all pavements, except asphalt, and constructed and maintained wooden sidewalks. This branch of the Street Commissioner's Department was transferred to the Roadway Department, under Mr. Wm. Macphail, and entails considerable additional work.

# ABOLITION OF GRADE CROSSINGS.

I again have to report that very little progress has been made in the abolishing of the grade crossings. Application has been made to the Railway Commission for the construction of a high level bridge across the Don at Queen Street.

Some negotiations have also taken place with the Grand Trunk Railway Company in reference to the depression of tracks through Parkdale, the total cost of the proposed improvement being \$1,050,000. The Railway Company were desirous that the City should contribute one-half the cost of this improvement, but your Council considered that this was too large a proportion, and negotiations are still in progress.

The question of a subway at Lansdowne Avenue was also before the Board of Railway Commissioners, but the Board made an order that in their opinion the total cost of this work should be borne by the City This has resulted in the work being dropped for the present.

Very little progress has been made towards the construction of a bridge at Yonge Street.

### SEWAGE DISPOSAL.

The report upon this matter, submitted by the City Engineer in 1901, was before the Provincial Board of Health during the past summer, and they have refused to allow the sewage to be emptied into the lake, as suggested, but have approved of proposition No. 2, viz., that the sewage should be treated in septic tanks and afterwards pumped on to land.

The system proposed for the district east of the Woodbine is progressing, and we hope to be able to advertise for tenders very soon.

# STREET RAILWAY MATTERS.

Litigation is still proceeding between the City and the Company to compel the Company to carry out the conditions attached to the contract, and a number of suits have been instituted by the Legal Department, information for which has been obtained by this office. A complete record is taken of the running of cars upon all lines, the expenditure in this connection during the year being \$6,886.

The rails upon a number of streets, especially King and Queen Streets, are very much worn and totally unfit for use. The Company have been notified to replace them by a heavier type of rail, but they have refused unless the City are willing to do the necessary repaving. The City claim that, under the contract, this work should be done by the Company, and the matter is still in dispute.

The following table shows the mileage of the street railway tracks, and the number of passengers carried from 1892, in which year the system was converted into an electric road, up to the end of 1905.

Year.	Mileage of Tracks.	Passengers Carried.	Population. (Approximate)
1905	94,69 miles.	67,881,688	262,749
1904	92.93	60,127,460	249,285
1903	92.78	53,055,322	239,678
1902	90.09 **	44, 137, 678	229,817
901	88.91 ''	39,848,087	221,583
000	85.06 **	36,061,867	211,047
899	85,00 **	31,826,940	206,027
898	84.83 ''	28,710,388	201,007
1897	86.14 ''	25,271,314	195.987
1896	85.28 "	23,537,911	192,926
895	85.22 "	23,353,228	191.395
894	81.43 "	22,609,338	189,864
893	78.84 ''	21,215,010	188,333
1892	70.42 ''	19,122,022	186,802

The following table clows the number of iron trolley poles erected during the year, giving the street and number of poles:

undas Street, from Humberside Ave. to Bloor St	. 42
ouge Street, at Power House	. 1
	43

The following iron trolley poles were painted during the year:

Dundas																
Yonge	Street		 					٠	٠		•	•	•		•	1
																_
																19

During the year the Company have also equipped a number of their cars with the Magann air brake.

# TEMPERATURE AND RAINFALL.

Through the courtesy of Mr. R. F. Stupart, Director of the Meteorological Department, a table is attached showing the temperature and rainfall during the year:

WEED CUTTER





WEED CUTTER



TEMPERATURE	S	PRECIPITATION:	<ul> <li>TORÓNTO.</li> </ul>	. 1905.
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	Т	emperatui	e.	Precip	Total Rain		
Month.	Year.	Max.	Min.	Rain.	Snow.	and Snow	
	0			in.	in.	in.	
January	17.2	42.1	-7.1	0.625	26.5	3.275	
February	16.7	37.8	-8.2	060	13.7	1.430	
March	30.3	64.0	5.7	335	1.7	0.505	
April	41.2	67.0	24.0	1.073	3.5	1.425	
May	52.2	75.6	31.9	$^{1}$ 3.230		3.230	
June	63.1	85.2	39.9	-3.185		3.185	
July	69.2	92.1	51.3	4.715	1	4.715	
August	67.1	88.8	48.9	4.220		4.220	
September	61.7	83.2	31.0	1.725		1.725	
October	48.5	78.0	25.2	3.485	1	-3.485	
November	36.0	54.0	12.7	1.500	2.8	-1.786	
December	31.2	45.9	6.9	1.670	6.1	2,280	
Year	44.5	92.1	-8.2	25,825	54.3	31.255	

### ASHBRIDGE'S MARSH.

A very large amount of filling has been done in the marsh, and the Assessment Commissioner has been successful in locating one or two industries. Unfortunately we have not been able to prevail upon the Government to carry out the diversion of the Don. I consider it is useless to try and induce the Government to do so, and am of opinion that the City should take immediate steps towards the carrying out of this very necessary improvement.

Railway facilities should also be provided from a connection with the Grand Trunk Railway tracks at Cherry Street and carried eastward along the 150-ft, road to Leslie Street. There is a great deal of land in this section of the City admirably adapted for factory sites, and could be made available if the necessary railway connection was provided.

# ISLAND MATTERS.

In the last annual report I called the attention of the Council to the damage that was being done to the south store of the Island. During the latter part of the season a temporary breakwater of piles was constructed at this point, commencing at the west end of the breakwater and carried eastwardly to a point west of Clandebove Avenue. The contract has been awarded for the construction of a permanent breakwater immediately south of this one, which will be commenced early next year. The present breakwater, which was constructed twenty years ago, is in a very dilapidated condition, and the Government should be urged to take steps to have it repaired.

I would suggest that either the Government or the City construct more groynes west of the present temporary breakwater to the lighthouse.

The weeds in the various lagoous have become such a nuisance and a drawback to boating, especially in the latter part of the season, that it was found necessary to purchase a weed-cutting machine in England, but it arrived too late to be operated this season. We trust next year, however, to be able to remedy this trouble to some extent.

### RÖADWAYS AND SIDEWALKS

During the year the Department carried out 386 separate contracts, and superintended the construction of 80 private walks, making in all 466 works undertaken during the year. This is an increase over 1904 of 68, and is the greatest number undertaken by the Department in any one year.

The following is a summary:

Carried over from 1904	47
Contract works	265
Day labor works	121
Private nermanent walks	80

The work done included the construction of 17.9 miles of pavements and 37.493 miles of concrete and .037 miles brick sidewalks. This is an increase of 21 per cent., as compared with the mileage of pavements constructed in 1904.

As usual, the City Engineer has tendered upon all works in competition with contractors, and this system has proved very satisfactory, a saving of \$10,687.13 being effected.

# ASPHALT PAVEMENTS.

The price of asphalt pavements has again declined, there being a decrease of 8 per cent, from 1901.

The concrete curb has entirely taken the place of stone curbing.

Up to the present time we have been using a 5-inch concrete curb, but this was found too light to give the necessary stability to the pavement. It is now proposed to increase this to 6 inches.

# BRICK PAVEMENTS.

1.6 miles of brick pavement was constructed during the year. I regret that a larger mileage of this material was not used, as it is one of the most satisfactory and economical roadways that can be built, but it is objected to by the property owners on account of the noise.

# CEDAR BLOCK PAVEMENTS.

The mileage of cedar block pavements is still decreasing.

# TAR MACADAM.

During the year some changes were made in the specifications for tar macadam pavements. The period of maintenance was extended from one year to three years. A great difficulty has been experienced in obtaining tar and pitch of a uniform consistency. I regret, however, that our experience with this class of pavement has not been satisfactory, and consider their use will have to be discontinued.

# BITULITHIC PAVEMENTS.

During the year 1.635 miles of bitulithic pavement was constructed by the Warren Bituminous Paving Company. This work was carried out upon receipt of sufficiently signed petitions from the property owners. The first pavement was laid in 1904, and has given very satisfactory results up to the present. It is not as noisy, as slippery or as dusty as asphalt, but has not been laid long enough to form an opinion of its wearing qualities. It has every appearance of being an excellent pavement, and has given great satisfaction to the property owners. The cost is \$2.25 per square yard, with a ten-year guarantee.

# CONCRETE PAVEMENTS.

Two small concrete pavements were constructed in lanes and they appear to be very satisfactory. They are easily cleaned, therefore sanitary, and are much cheaper than either brick or asphalt.

# CONCRETE SIDEWALKS.

During the season 37½ miles of concrete sidewalks were laid. This is an increase of 20 per cent, over what was laid in 1904. There is still

a large number of old plank sidewalks, which are in a most dangerous condition, and we hope, during the season, to be in a position to construct a much greater mileage of concrete walks.

The question of coloring the surface of concrete sidewalks was studied and experiments were made upon two or three streets. 84 lbs. of Venetian red to one barrel of cement, and one pound of carbon black to one barrel of cement was used for this purpose, and these quantities were found to give a pleasing tint. I am of opinion, however, that this will not be permanent, a perceptible fading having been noticed.

For further information in connection with this work, I would refer you to the report of the Assistant Engineer in charge of the work.

### THE MAINTENANCE BRANCH.

In July, 1905, the maintenance and repairs of roadways and sidewalks was transferred to the Roadway Department, and the operations of this branch are also set out in the report of the Assistant Engineer in charge of roadways.

# SEWERS.

During the year 25,320 lineal feet of sewers of various kinds were constructed. This brings the total mileage of sewers within the City to 245.11.

During the year the Department also constructed, by day labor,

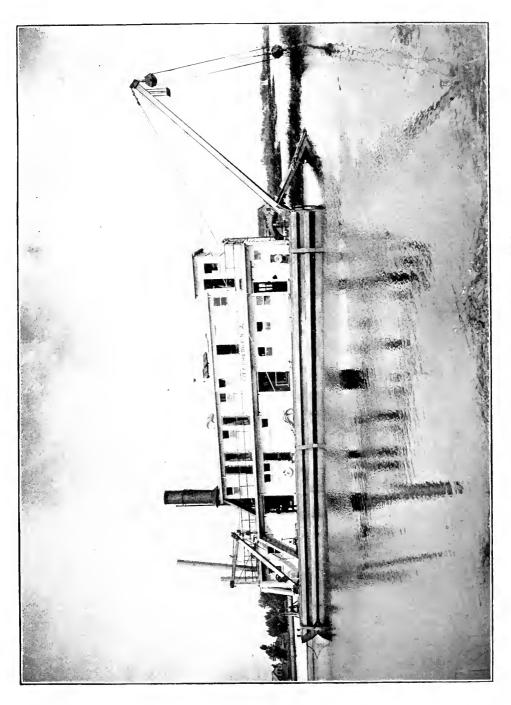
48,408 lineal feet of 6-in. drain.
3,032 " " 9-in. "
103 " " 12-in. "
40 " " 18-in. "

from a connection with the main sewer to the property line, the cost of which was paid for by the property owners. This is an increase of 14,000 lineal feet over 1904, and indicates the great increase in the number of houses being erected.

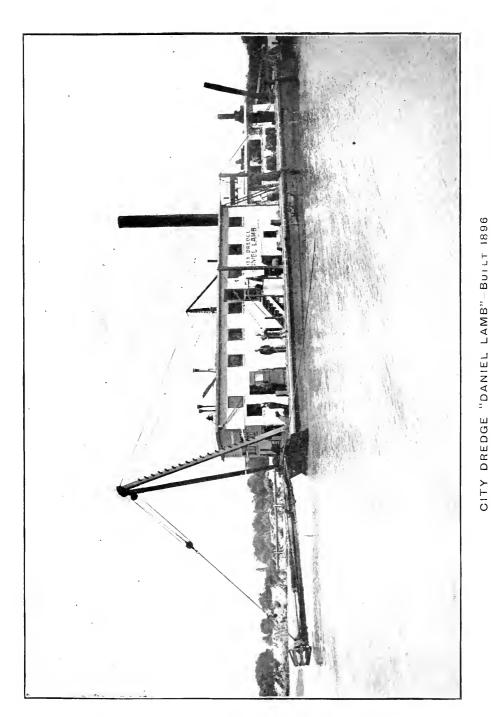
# DREDGING SLIPS.

The usual dredging was done in the slips on the Bay front into which the various sewers empty, the total quantity of material moved being 16,273 cubic yards. This material was deposited in the lake a distance of about 8 miles from the eastern entrance.

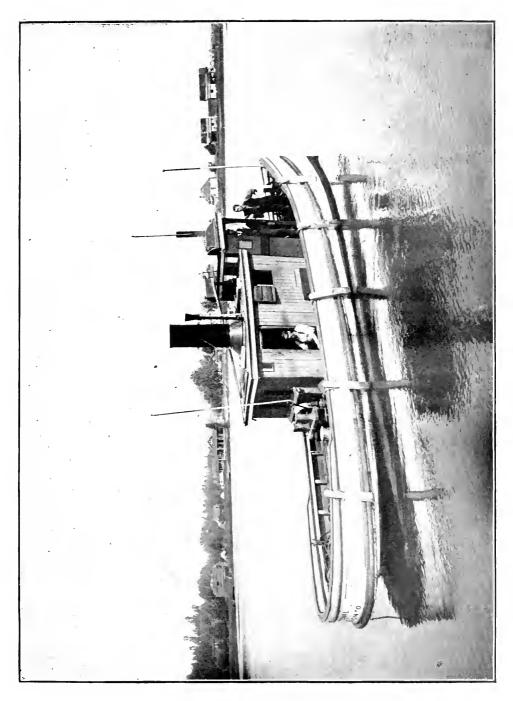
For further information in connection with this Department I beg to refer you to the Assistant Engineer in charge of the work.













## TELEPHONE AND ELECTRIC LIGHT CONDUITS.

During the year the Bell Telephone Co. constructed 24,315 feet of conduits, equal to 160,674 duct feet.

The Toronto Electric Light Co. constructed 6,660 lineal feet or 99,900 duct feet.

## REPAIRS AND MAINTENANCE OF BRIDGES, WHARVES, ETC.

During the year the usual repairs were done to the various bridges.

Two small wharves were constructed at the Island, one near the bridge over Long Pond, for the delivery and collection of freight, and the other at the end of the lagoon close to the Lakeside Home.

A new shelter has also been erected at Centre Island wharf.

The necessary repairs have been carried out to the City docks.

The various free-bathing stations have been carefully inspected and visited. These stations should be extended, as during the season the attendance has greatly increased. The station at Sunnyside is very much congested, and an additional 100 feet of land east of the present baths should be provided.

Two new lavatories are now in course of crection, the one at the corner of Yonge and Cottingham Streets, being overhead, and the other at the corner of Spadina Avenue and Queen Street, being underground.

### WATER WORKS MATTERS.

The new 15-million gallon vertical, triple expansion engine has been installed and, although still in the contractors' hands, is now pumping water into the system. This engine was designed by the Allis-Chalmers Company, and constructed by the John Inglis Company of this City, the amount of their contract being \$150,000. The entire work reflects great credit upon both the designers and the constructors. The official test has not been made, but sufficient information has been gathered to show that the engine will exceed the requirements of the contract.

Another engine of a similar capacity should now be provided.

In connection with the By-law providing for the sum of \$1,000,000 for water works improvements, a 36-inch main has been constructed from the corner of Bathurst and College Streets to the Rosehill Reservoir, a distance of 16,700 feet, the total cost of this main being \$171,

688 42. A 24-inch main has also been constructed from the corner of Church and Front to the corner of Queen and Sumach, and a 16-inch main has been carried from this point along Queen Street to the corner of Broadview Avenue.

## SIX-FOOT CONDUIT.

The contractor for this work has completed the laying of the pipe, from the shore crib to the south tunnel shaft, a distance of about one mile, and also the greater part of the filling over the same.

The contract has been let for the construction of a tunnel, from the north end of this conduit carried under the bay to the Pumping Station at the foot of John Street, a distance of 5.130 feet, the area of the tunnel being equal to that of a cylinder 8 feet 4 inches in diameter. The contract price is \$269,000.

For details in connection with the Water Works Branch of the Department, I would refer you to the report of the Deputy City Engineer.

Respectfully submitted,

C. H. RUST.

City Engineer and Chief Engineer and Manager of the Water Works.

MCPHERSON AVENUE ASPHALT BLOCK



# PAVEMENTS. ROADWAYS, PERMANENT SIDEWALKS, PLANK SIDEWALKS AND REPAIRS.

CITY ENGINEER'S DEPARTMENT,
Toronto, December 31st, 1905.

Mr. C. H. Rust,

City Engineer.

DEAR SIR,—The following report shows in general and detail the extent and cost of all work done under the supervision of the Roadway's Branch of the City Engineer's Department of the City of Toronto for the year 1905.

Three hundred and eighty-six separate works were undertaken, and the construction of 80 private permanent walks superintended, making in all 466 works undertaken during the year. This is an increase in the number of works undertaken during the year of 68 over 1904; of 99 over 1903; and of 244 over 1901, and is the greatest number ever undertaken by the Department in any one year.

## A summary of the works follows:

Carried over from 1904 47	
Contract works	265
Day labor works	121
Private permanent walks	80
` · ·	
Total works undertaken	466

The work done included the construction of 17.902 miles of pavements, and 37.537 miles of concrete and brick sidewalks. A reference to Table No. 2 shows that this is an increase in mileage of pavements constructed as compared with 1904 of 3.146 miles, or 21 per cent., and that, while there is an increase shown in all classes of pavements, except asphalt, the increase in permanent pavements constitutes 80 per cent. of the total increase. The mileage of asphalt pavement constructed shows a decrease of nearly 15 per cent, when compared with the mileage constructed in 1904. This decrease is to be regretted, because, at the prices ruling during the last two years for asphalt pavements, this class of pavement is unquestionably the most economical as well as the most reliable.

37.537 miles of concrete and brick sidewalks were constructed dur-

ing the year 1905. This is an increase of nearly 21 per cent, when compared with the mileage constructed during 1904, and is an increase of 8 per cent, over the mileage constructed during 1903, which, up to that time, was the greatest number ever undertaken in any one year by the City of Toronto.

The system of the City Engineer tendering in competition with contractors was continued during 1905, with what should be considered satisfactory results, when the amount of work done by day labor and the actual cost of construction are considered. His tender was found to be lowest on 130 contracts—103 sidewalks and 27 pavements and roadways—18 works were done by order of Council without the formality of calling for tenders, and 4 were taken from successful tenderers and done by day labor on account of dilatoriness on the part of contractors. Of these, 121 were carried out as day labor works under the supervision of the Department, while the remaining 31 were done by contractors at the Engineer's contract prices, whereby a saving was effected to the ratepayers of nearly \$1,200. Tables 10 and 11 show the actual cost of these works, also the loss or gain when compared with the next lowest contractor's tender.

The following table classifies the various works constructed during the year 1905, as compared with those constructed during 1904. Only in the number of asphalt pavements and macadam roadways is there seen a decrease. The total shows an increase over 1904 of 68 in the number of works constructed under the direction of this Department:

TABLE No. 1.

Class of Work.		Works.
	1904.	1905.
Asphalt	33	30
Bitulithie	4	9
*Brick on concrete	12	12
Concrete	1	<b>2</b>
Cedar block, on sand	3	. 4
Cedar block, on concrete		2
†Macadam	14	12
Tar macadam, 1904 specifications	8	3
\$Tar macadam, 1905 specifications		6
Construction of new track allowance	1	2
Reconstruction of T. A. (brick, scoria, concrete)	4	4
Grading	2	2
Brick sidewalks	1	1

$Cass\ of\ Work,$	•	No. of	Works.
		1904.	1905.
Concrete sidewalks .		. 247	279
Private contracts (s	sidewalks)	. 62	80
Concrete curbing		. 6	15
Granite setts			1
Treated wood blocks	٠		22
		398	466

<sup>\*</sup> Including vitrified block.

In connection with pavements and sidewalks, including those proposed but not carried out, the following numbers of plans, drawings, and estimates were made:

Roadway plans	SO
Detailed drawings	15
Estimates	611

 $<sup>\</sup>dagger$  Including reconstruction.

<sup>§</sup> Including bituminons macadam.

TABLE No. 2.

RE OF DIFFERENT CLASSES OF PAVEMENTS, ROADWAYS AND SIDEWALES LAID FI

Mile.	AGE OF	Mileage of Different Classes of Pavements, Roadways and Sidewaeks Laid from 1890 to 1905	ENT C	ASSES	OF PAV	EMENTS,	Row	WAYS A.	ia X	WALKS	Lung	E031 130	T 01. ()()	90.5. 1		
Class of Work.	1830	1681	2681	1893	1894	1895	1896	1897	888	96×1	0061	1061	1902	1903	1901	1905
Pavem'ts & B'dw'ys:	Miles	Miles	Miles	Miles	Miles.	Miles.	Miles.	Miles.	Miles.	Miles, Miles.		Miles.	Miles.	Miles.	Miles.	Miles.
Asphalt	1.73	1.635	6.216	5.607	3.067		0.366	0.460	x 7	6.215	6.348	6.215 6.348 4.449 5.237	5.537		6.336	5,404
Bitulithic	:	:	:	:		:					:	:	:	0,063	- 558 - 558 - 5	1.635
Cedar bl'k on sand												1		i	1	
k pl'k found't'n	15.51	9.186	3.349	3,249	±.8552	1.753	Z) +	5.459	4.831	 	2 8 2 2	125		+	10.0	(£:4:
Macadam	:	0.123	161.0	:	0.059	1.663	1:6:5:1	0.510	680.5	5.0.3	2.503	;; ;;	57.0	5.73	5.7	: : : : : : : : : : : : : : : : : : :
Tar macadam		:				:	:		:	:	:	:		2 7 7 7 8 1	0.550	1.25.
Cobble	6.10	0.069	0.366		:		:			:	= 0.08 = 0.08	:				
Tamarae on con .	0.192	0.077		:			:	:	:	590.0	:	:		0.021		(3. (3. (3.)
Cedar bl'k on con.			8.416	2.185	0.826	1.22.0	0.038		0.084	620.0		0.021	:	0.063		100
Stonesetts on coll.			0.705	3.743	2.563	0.085	:	:	:		0.107	0.028		0.427		669
Scoria bl'ks on con	5.1.38		0.028			0.117			5.986	1.367	1.247	0.669	:	:	0.613	939.
Brick on con				3.96.5	0.787	0.744	1.032	5.803	6.029	3.670	5.475	0.885	4.272	5.605	5.876	3.751
Brick or gravel					:		0.028	0.838	0.352	0.943	0.057	- 1	:	:		:
Br'k on br'k'n st'n		:	:	:	:				:	0.546	0.516	1.627	:	:	:	
Concrete payen'ts,				:	:	0.071	:	:	0.057	:		:	0.041	0.147	0.053	.055
Gravel		:	:	:			:	3.138	4.756	0.069	0.3633	0.555		•	:	:
Concrete in track			:	:			:	:		• • • • • • • • • • • • • • • • • • • •	:			:		:
allowance	:	:	:	:	:	:	:	:		:	0.203	0.270	5.136	:	2.20	
Totals	17.670	17.670 11.090 19.574 18.748	19.574	18.748	8.154	5.816	3,553	13.308	24 642	21.120	24.666	24.666 15.629	17.413	16.839	14.756	17.902
Sidewalks: Concrete	1.496	930	20 00 00	926	1 25	α 5:	0.612	1.050	2.548	5.474	15.227	5.474 15.227 17.305	97.360	34.896	31.058	37.500
Crono Harr	1 973	_		900	0 0									:		:
Brick						: :	#00 C	0.823	1.188	0.292	0.038	0.511	0.049	0.093	0.001	780.
Totals	2.699	2.328	1.612	9.294	1.143	1.918	0.816	1.873	3.736	5.766	15.265	5.766 15.265 17.816	27.409	34.989	31.059	37.537

The first pavements laid under the Local Improvement System were constructed during the year 1881, and the annual variation in mileage of paved and unpaved streets, with classification of same, up to

SHOWING THE DIFFERENT CLASSES OF PAVEMENTS AND ROADWAYS AND MILEAGE OF SAME FROM 1881 TO 1905. TABLE No. 3.

Year.	Cedar Block.	Stone and Scoria.	Asphalt	Wood on	Иясядяш	Дяг. Дясяцяні	sidifulid	Briek.	Gravel.	Gravel, Concrete Unpaved	Unpayed	Total Mileage.
	Anles.	Miles.	Miles.	Miles.	Miles.	Miles	Miles.	Miles.	Miles	Miles	Miles	N. N.
SI	<u>16.8</u>	0.0			20.00	:					02.09	1 2 2
÷	13,41	0.03			X2. 23.		:				12	=======================================
÷	26.90	0.03			13						10 70	: ::
- ₹	33.75	0.25			52.32	:	:				11. 31.	101 219
· ·	39.84	07.0	:		50.17						25 GL	3
ź	53.53	0.36			57.36						7	3
17	64.11	98.0	0.07		7:0:						10.00	9
x X	79,55	92.0	0.55		12.76						1 X	
33	68.73 6	0.36	3,36		38.65					:	2015	1 2 2
9.	100 57	0.36	50.08		36,63					•	13.5	127
16	116.83	0.59	6.66	67.0	36.39						X	1000
33	116.86	0.65	10,49	67 0	3						7	0.00
3	113, 19	52.0	11.25	67.0	34.58						1000	100
Ξ.	111.16	<u>x</u> .c	13.70	61.0	39.95				:	:	2001	
95.	22.001	0.81	25.7	G+ 0	39, 15			2			7	7.000
9	52.301	<u>18.0</u>	14 61	5,53	12.68			2.			1 5	0.00
12	98: 101	z c	15.61	0.53	90.0			1 00	•		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1000
ĸ	91.90	0.65	18.35	- i e i	16.14			5.0	90		12 ZZ	1:00
3		0,65	24.33	0.67	45.03			x			- X	500
Ξ	70,49	29.0	<u>x</u> .e:	0.67	46,69	57.0		10.77	7.00		5	0.00
Ξ	2.5	<u>x</u>	34.93	0.67	28.30	0.26		::	10.0		3	0.656
31	18.57	c.8.	39,75	0.25	50.05			12.51	2,32		15	0.95
 23	13.25	12.	71.74	0.20	1.00	::26		47.77	12	-	500	1000
7.01	**	1.11	52.10	07.50	9g.Fg*	4.20	56.	15.54	5,83	02.0	X.	100
_ 	**	<u>.</u> .	000 372	11. 11.								

\*Including cedar block and macadam with payed track allowance respectively.

Table No. 4 shows the percentage of the different classes of pavements and roadways:

#### TABLE No. 4.

*Cedar block	17.66 per cent.
Stone and scoria	.63
Asphalt	20,36 "
Wood on concrete	.09 "
*Macadam	19.90 "
Tar macadam	1.98 "
Bitulithie	1.15 "
Brick	6.26 "
Gravel	2.11 "
Concrete	.05 "
Unpaved	29.81 "

<sup>\*</sup> Including pavement with paved track allowance.

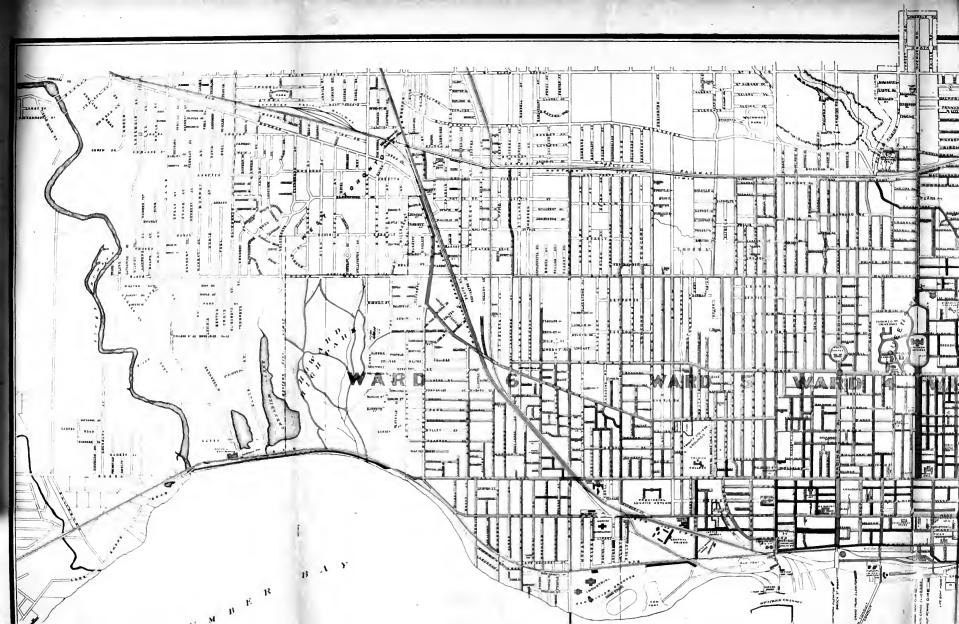
#### ASPHALT PAVEMENTS.

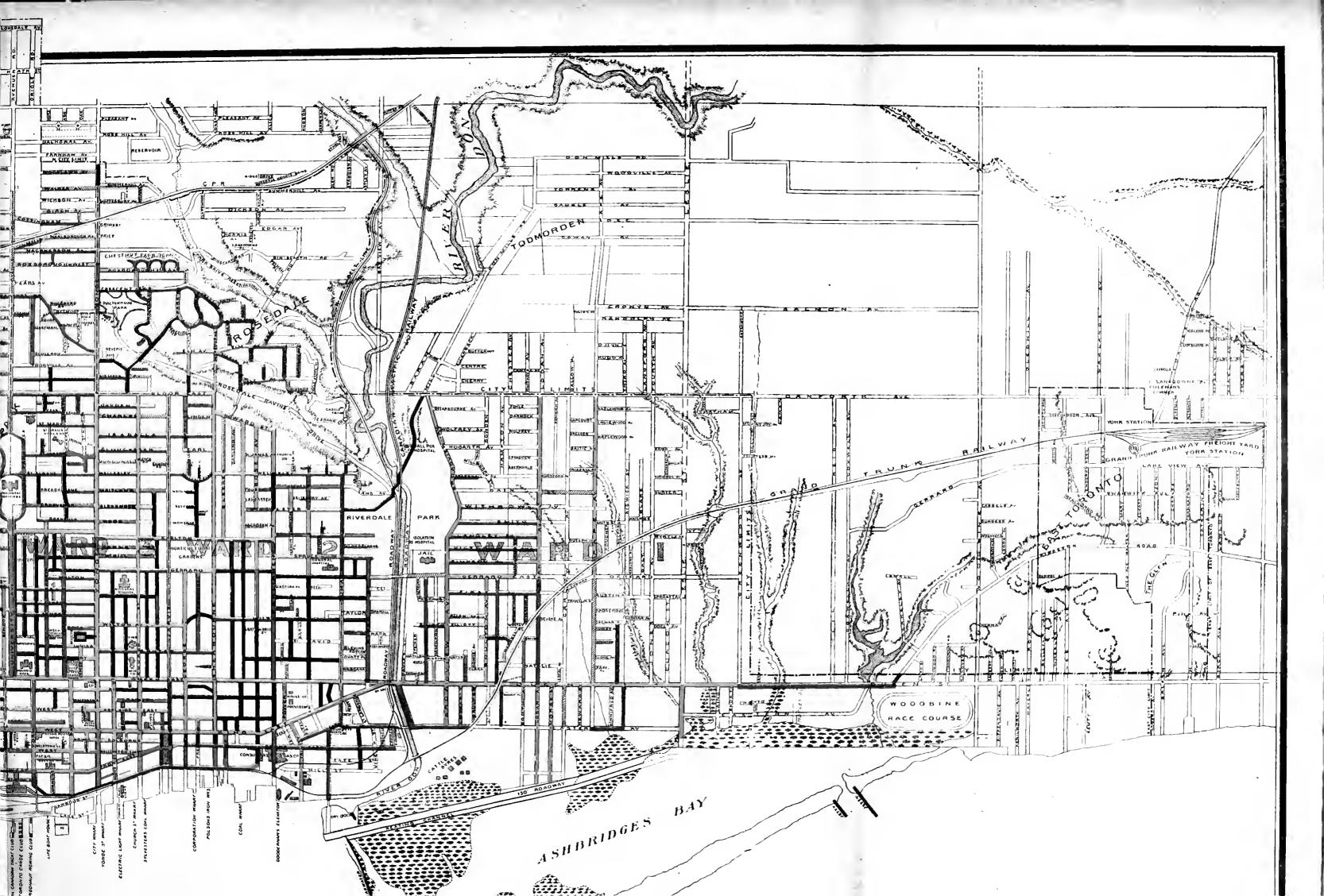
During the year 1905 five heavy asphalt pavements and twenty-five light asphalt pavements were constructed. The pavements laid aggregate 17,000 square yards of heavy asphalt, and 54,200 square yards of light asphalt, and a total length of 5,404 miles. The total length of asphalt pavements in the City is now 56,29 miles, or 20,36 per cent, of the total length of paved and unpaved streets in the City.

Last year a table was compiled showing the maximum, minimum, and average price of asphalt pavements, from 1901 to 1904 inclusive. Below is found this table brought to date by the addition of the prices that prevailed during 1905:

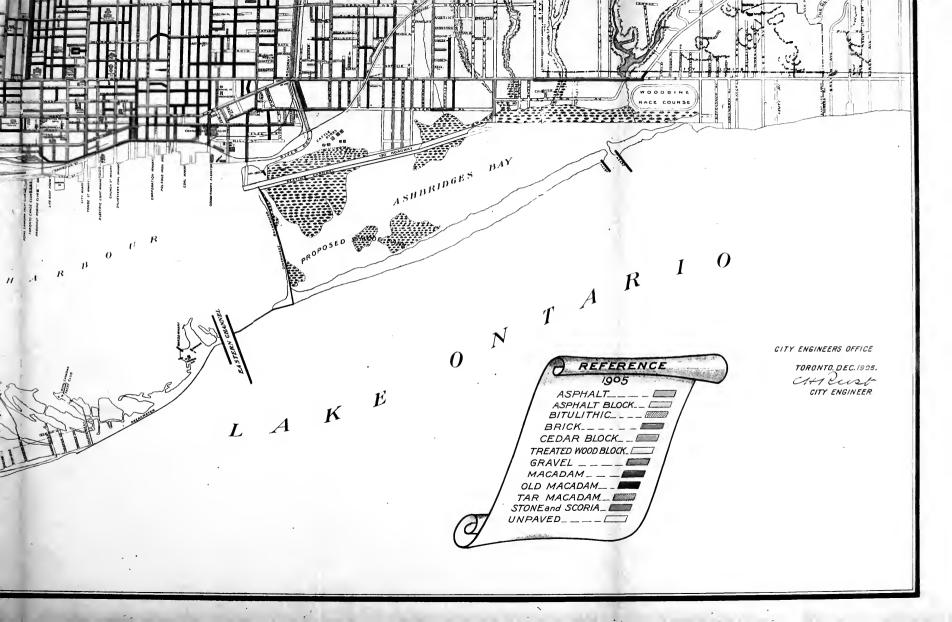
	N	Iaximum.	Minimum	. Average.
1901	Heavy	. \$2.70 .	\$2.30 .	$\$2.54\frac{6}{10}$
4.4	Light	. 2.23	1.82	$2.04\frac{1}{2}$
1902	Heavy	2.60 .	2.45	2.54
	Light	2.15.	1.66	$2.01_{4}^{1}$
1903	Heavy	2.50 .	2.14	$2.21rac{3}{5}$
	Light	1.88 .	1.60	1.70
1904	Heavy	. 2.30	2.15	$\dots \dots 2.22 \frac{6}{16}$
	Light	. 1.83 .	1.53	1.65
1905	Heavy	$\sim 2.19$ .	1.99	2.05
	Light	. 1.66 .	1.36	1.51

This shows a drop of 8 per cent, in the contract cost of heavy asphalt, and  $8\frac{1}{2}$  per cent, in that of light asphalt when compared with the prices prevailing in 1904.









The repairing of asphalt pavements, upon which the terms of guarantee have expired, was let by tender, the prices for the year being 89 cents and 82 cents for the heavy and light asphalt surface-respectively, and \$5.34 per cubic yard for concrete foundation. There was expended during the year the sum of \$22,600 for asphalt repairs.

Concrete curbing has entirely superseded stone curbing in the construction of asphalt pavements, 41.253 lineal feet of combined concrete curb and gutter, and 7,500 lineal feet of concrete gutter only having been laid during the year 1905. The 5-in, concrete curb is found to be too light a construction to give the necessary stability to the pavement, and it is proposed in future to favor more largely the use of 6-in, curbing. This will add very little to the cost, and much to the appearance and character of the work.

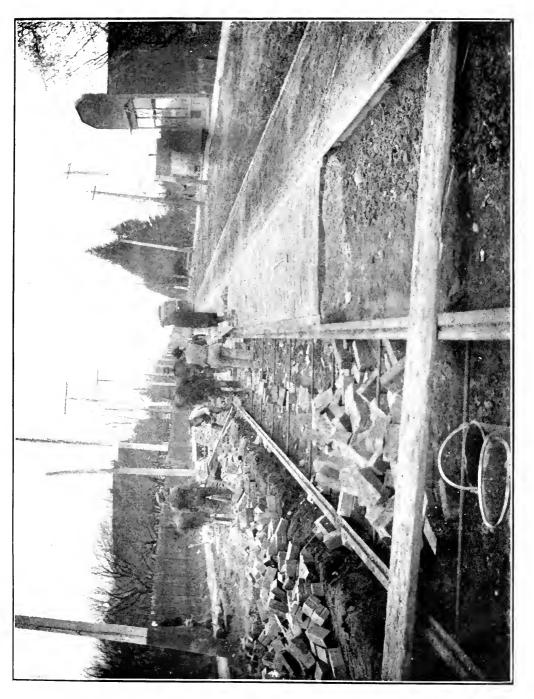
The quantities, prices and other details connected with the asphalt pavements constructed during the year are tabulated in Tables Nos. 7 and 8. The physical and chemical details of the asphalt mixtures used in paving during the year are also tabulated separately.

Table No. 5 is a list of the streets paved with asphalt on which the contractors' terms of guarantee have expired:

TABLE No. 5.

Showing Streets Paved with Asphalt upon which the Contractors' Guarantees have Expired.

				<u> </u>	
Street.	From.	Το.	Length Feet.		Expiry of antee.
Jarvis	. Queen	Bloor	6,734	Oct.	1, 1894
Wellington	1.71	Yonge	900	June	28, 1894
Sherbourne		Bloor	6,786	June	1, 1895
Simeoe		Queen	1,182	Aug.	1, 1895
Ontario	14.1.	Howard	2,824	July	28, 1895
Sherbourne	1 7 7	Queen	1,160	July	2, 1895
Bloor	Yonge	Sherbourne	2,661	Nov.	18, 1895
Scott			374	Nov.	7, 1895
Wellington	1.3	York	848	July	18, 1896
Gerraid	Jarvis	Sherbourne	934	July	14, 1896
Melinda	. Youge	Bay	587	Aug.	5, 1896 $5, 1896$
Jordon			379	Aug. Nov.	11, 1896
Sherbourne		South Drive	1,076 $1.175$	1 .	15, 1896
Bay		Queen	$\frac{1,175}{3,286}$	Aug. Sept.	25, 1896
St. George	. College	Bloor	349	May	1, 1897
Toronto	3.7 3		3,001	July	21, 1897
Adelaide	.   York	Spadina	414	Sept.	1, 1897
Victoria	111 1	. Adelaide	2,134	Sept.	1, 1897
Rose			1 000	Nov.	9, 1897
Yonge	C	V	7-0-	Sept.	7, 1897
St. James			1 011	Nov.	14, 1897
Yonge		Bloor	. 000	Sept.	30, 1897
Devonshire Pl.		F . 3	1 0 0 0 0	Nov.	25, 1897
Yonge	***	1	0-3	June	27, 1898
Richmond				July	13, 189
Winchester	T. 31			Aug.	24, 1898
Mann's Lana	Wellington			Aug.	23, 1898
Cont.	Yonge	l .	666	Sept.	25, 189
Lane Around b	ıla nd Revenue Offic	e	265	Oct.	5, 189
Linden	Sherbourne		585	Oct.	$21, \cdot 189$
Hoshin	St. George	Queen's Pk. cr	. 1,130	June	27, 189
Carlton	Jarvis	. Sherbourne		June	7, 189
Oneen	Yonge	River		July	14, 189
Bleecker	Carlton	Wellesley		July	5, 189
Wellesley	Sherbourne	Parhament		Sept.	25, 189
Cecil	Spadina	Beverley	1,052	Sept.	27, 189 8, 189
Adelaide	Yonge	. Church	. 903	Nov.	
King	. Simcoe	. Sherbourne .	4,999	June	15, 189 25, 190
Leader Lane	King	. Colborne	. 197	May	25, 190 $21, 190$
Avenne Rd. /tr'	ks) Bloor	Davenport	$\begin{array}{c c} 2,289 \\ 2,280 \\ \end{array}$	May Aug.	29, 190
Avenue Road.	Bloor	Davenport	2,289	Sept.	9, 190
	McCaul	Beverley	606	Sept.	28, 190
Victoria		Queen	094		
Lane 1st W. o	Adelaide	Temperance		May	28, 190
Also lane runn	ing E. and W. fro	ın above lane	. 303	May	28, 190
Leader Lane	Wellington	. Colborne	. 193	May	25, 190 95, 190
Oneen Street b	rid ge	At Don	.] 134	July	25, 190





#### BRICK PAVEMENTS.

In 1905 brick pavements on streets aggregate 1.633 miles, as compared with 1.402 miles constructed in 1904, and the construction and reconstruction of track allowance aggregated 2,118 miles, as compared with 1.474 miles constructed in 1904. Compared as to area, 41,656 square yards of brick pavement of all kinds was constructed in 1905, and 27,946 square yards in 1904. Of this total area, 10,415 square yards was laid with Canadian vitrified brick, and 31,241 square yards with American vitrified block. In last year's Annual Report I anticipated this preponderance of the American product, and submit that the result is quite justifiable, when the price and quality are compared. At the lowest ruling prices, the Canadian brick required to lay one square yard of pavement cost 944 cents, and the American blocks required to lay a similar area cost 97 cents, while the quality of the product, as determined by the standard abrasion test after 1,000 revolutions and 2,000 revolutions, is represented by the ratio:

Canadian	Cafter	1,000	revolutions)	 	 .17.7	per cent.
American		44	**	 	 .11.8	44
Canadian	cafter	2,000	revolutions)	 	 . 26.2	6
$\Lambda$ merican		••		 	 .17.6	W.

To obtain these results, 110 samples of Canadian brick were tested, and 160 samples of American block.

The track allowance construction during the year shows .924 miles of new vitrified block construction, 1.194 miles of vitrified block reconstruction, and .600 miles of scoria block reconstruction, or a total of 2.718 miles of all kinds, as compared with 2.485 miles constructed in 1904.

In constructing brick pavements during the year 13,690 lineal feet of concrete curb, and 1,788 lineal feet of stone curb was placed.

The quantities, prices and other details of the brick pavement constructed during the year are shown in Tables No. 7 and No. 8.

#### CEDAR BLOCK PAVEMENTS.

It is gratifying to be able to note that the increase in the mileage of cedar block pavements on sand is very small; ...630 miles, as compared with .511 miles laid in 1904, while in 1900, 7.842 miles of this class of pavement was laid. On sections of two streets, cedar blocks on a

concrete foundation was the class of pavement constructed, the blocks in one case being blinded with gravel, and the other case with heated gravel saturated with a mixture of one part of coal tar to two parts of pitch, added at a temperature of 215 degrees Fahrenheit. Half a mile of this class of pavement was constructed.

In connection with cedar block paving, 2,216 lineal feet of concrete curb, 5,513 lineal feet of stone curb and 3,361 lineal feet of wooden curb was constructed. Tables Nos. 2 and 8 show in detail the quantities and cost of the cedar block pavement laid during the year. Table No. 6 shows the sections of streets on which the final assessment for pavements has been paid or will be paid during the ensuing year. Many of these pavements are beyond repair.

 ${\bf TABLE~No.~6.}$  List Showing Date of Final Assessment on Different Classes of Pavements.

Street.	From.	To,	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Adelaide	York	. Spadina	Asphalt	1892	1900
		. York		1899	1904
		. Church		1894	1904
		Northeote	Gravel	1898	1901
Arovle	Dundas	Gladstone	Cedar bl'ck	1895	1900
Arthur	Bathmest	Gladstone	CCUM OF CK	1898	1903
Arayle	Dundas	Shaw		1900	1905
Arthur	Euclid	. Dundas		1900	1005
		. Davenport		1895	1905
Barton Ave		Euclid		1890	1900
		Euclid		1892	1897
		. Howland	4.	1892	1898
Rathurst	S e of loridor	North Ry. Gate.		1886	1897
		Niagara		1898	1903
Bay			Asphalt	1891	1899
		Esplanade		1899	1904
		Afton		1898	1901
		Dundas		1898	1901
Beatty Ava	King	Oneen	Cedar bl'ck	1899	1904
Page	Elm	. Queen	Macadam	1900	1905
Rallwoode	Oncen	. Mansfield	Codar blok	1900	1905
Paradox	Chrom	College	Macadam	1896	1901
Paramana	Darway	. Hazelton	Carlon blak	1900	1905
		West terminus		1890	1900
Bismarck Ave		Park Rd		1891	1897
Dismarck Ave	Doule D.1	East End	Calmuld'al	1891	1897
Dismarck Ave	Wallan lass	H. seard	Cedal DICK	1893	1898
Dleecker	Wellesley	Howard	A. a.b.ale		
		. East End		1894 1896	1902 1897
Dievins	Sumacu	. Avenue Road	Massalan	1889	
Dioot	Younge	. Sherbourne	Macadam.		1895
				$\frac{1890}{1889}$	1900
Bloor				1890	1901
		Dufferin		1891	1901
Bloor	Unition	Lansdowne			1901
Bolton Ave	Dunerm	Canadowne		1894	1901
Dollon Ave	Queen			1898	1903
Booth Ave	Queen	Eastern		1891	1896
Borden	Caster	Bloor		1900	1905
Dreadalbane	1 onge	St. Vincent	Coden blet	1902	1905
Drighton Ave	rape	East End	Cedar bi ck	1890	1899
Droadview Ave.	withnew Ave.	Danforth Ave		1890	1898
proadview Ave.	Queen	Gerrard		1887	1897
proadview Ave.	Gerrard	Withrow Ave .		1887	1897
proadview Ave.	Queen	Eastern		1891	1896
Broadway PI	Spadma	. 159 ft. 3 in. west.		1899	1904

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Brock Ave	Logan	Dundas	Cedar bl'ck	1898 1888 1892	1901 1898 1897
Caer-Howell .	McCaul	Simcoe	. Macadam	1902	1905
		Simcoe		1902	1905
Casimir		North to a lane		1889	1898
		Cameron Pl		1899	1905
		Eastern		1889	1899
		Bay		1885	1897
Carlton				1898	1903
		Sherbourne		1894	1904
		376 ft. north		1899	1904
		Eastern		1889	1899
		End of Carr		1894	1899
		Beverley		1894	1904
Charles	Church	Jarvis	Cedar bl'ck	1897	1902
		Melville		1891	1898
		136 ft. east		1893	1898
		Oxford		1886	1896
		l South sides		1898	1903
		. Mansfield		1900	1905
Classic Pl		East end		1897	1902
Clifford		Strachan		1887	1897
		. College		1899	1904
		Crescent Rd		1891	1897
		. West Market		1898	1903
Collahie		Beaconsfield		1899	1902
	1,350 ft. west o	f Avenue Rd		1886	1896
Cottingham	Yonge. Rathnally	Poplar Plains R	kd.	1889	1899
Crawford	Arthur	. North end	. Br'k on gr'l	1899	1903
Crescent Rd		. Rosedale Rd		1899	$^{-1}$ 190.
Crocker		Claremont		1890	1900
Czar	Yonge	. North	Asphalt	1893	1900
D'Arev	McCaul	Spadina	Cedar bl'ok	1895	1900
		. End of sewer		1891	1896
Davenmer Pd	Youre	. Hazelton	Macadan	1898	190:
Davenport Pd	Avenue Rd	. 636 ft. west	., reacadam.	1900	190
Davies Ave		. Matilda		1894	1899
Defoe	Tecumseth	Niagara	Journal of the	1890	1900
Delaware Ave	College	Bloor		1892	189
Delaware Ave	Bloor	Van Horne		1891	189
Devoushire Pl	Hoskin	. Bloor	Asphalt	1892	190
		. Dovercourt		1890	1900
Division .	. Spadina	Huron			190
Dovercomt Rd	Bloor	Van Horne			190
		. Dundas		1898	190
= recommend.	. gacon	. Dundas		1898	190

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.	
Dufferin	King	G. T. R	Cedar bl'ck	1889	1898	
Dufferin				1891	1901	
Dufferin	Dundas	Lindsay		1899	1904	
Dunn Ave	Queen	Lake	Gravel	1898	1901	
		South Drive		1890	1900	
Dundas				1893	1898	
Dundas				1900	1905	
Dupont	Bathurst	Manning		1892	1897	
Earl				1893	1898	
Elgin Ave				1899	-1904	
Elliott			Cedar bl'ck	1898	1903	
		Queen		1898	-1901	
	Yonge		Macadam	1899	1902	
Empress Cr		Jamieson		Parkdale	1897	
Empress Cr		Jamieson		1893	1898	
		College	1	1897	1902	
		Robinson	1	1890	1898	
		East term	! !	$\frac{1899}{1893}$	1904 1899	
Evans Ave		West term		1892	1898	
Farquhar's Lane	Front	Esplanade	Cobble st'e	1900	1905	
Fenning	Queen	Humbert	Brick	1897	1963	
First Ave	Broadview	Logan	Macadam	1899	1904	
		Brock		1899	1904	
Frankish		Sheridan		1890	1899	
Frizzell		Pape		1891	1900	
		Trinity	Macadam	1899	-1902	
		Sherbourne		1899	1902	
Foxley	Dundas	Dovercourt	Gravel	1898	1901	
Gerrard	Broadview	Howland	Cedar bl'ck	1888	1897	
Gerrard		Sherbourne		1891	1901	
Gerrard		Jarvis	Macadam	1899	1904	
		East end		1894	1899	
		Argyle		1898	1903	
Gladstone	Queen	Dundas	Cedár bľck	1897	1902	
Gordou		Dufferin		1891	1896	
Grace	Arthur	College		1891	1902	
Grafton Ave		Triller		1891	1899	
Grand Opera House Lane.		149 ft. South		1896	1902	
		McCaul		1900	1903	
		Esther		1897	1903	
	Beverley	Huron	Macadam .	1902	1905	
		Surrey Pl		1899	1905	
		North Term		1890	1900	
		Queen's Park		1900	1903	
Gwynne Ave	King	Queen	Cedar Bl'ck	1898	1903	

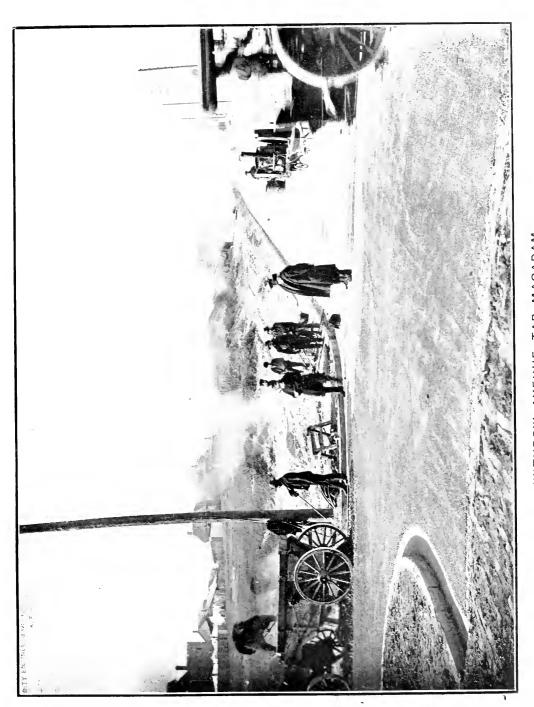
Street.	From.	То.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.	
Halton	Shaw	Dundas	Cedar Bl'ck	1892	1897	
Hamburg Ave	Bloor	. Union		1891		
Hamilton , ,	Paul	. Elliott		1890	1899	
Hamilton	Queen	Paul		1891	1899	
Harbord	Huron	Bathurst		1897	1890	
Harbord	St. George	Huron	Macadam	1898	1902	
Henderson	Clinton	Grace	Cedar Bl'ck	1891	1898	
Henderson	Manning	Clinton	٠٠	1900	1905	
Herrick	Bathurst	Lippincott	"	1892	1897	
Heward Ave	Queen	Eastern Ave		1889	1899	
HICKSON	St. Clarens	294 ft. east	Macadam	1900	1905	
Hashin And	Roneesvales .	High Park	Cedar Bl'ck	1893	1899	
Hoskin Ave	D. George	Q's P'k Cres. Driv'		1894	1904	
Hi.	Dundas	Roncesvalles	Cedar Bl'ck	1891	1 1901	
Humbort	D	North End		1889	1899	
Huntley	Briden	Dundas Elm		1898	1903	
Huron	Physles	Grange		1890	1900	
				1893	1898	
		Jarvis		1898	1901	
Jarvis	King	Queen		1896	1200	
Jarvis	Queen	Bloor.	Asubalt	1889	1899	
John	King	Oneen	Cadar Blok	1890	1899 $1900$	
Jonn	King	Front	Magadam	1895	1899	
John	Bridge	Lake		1898	1903	
Johnston's Lane	Adelaide	South end	Brick	1897	1903	
		King	1	1891	1899	
	Jefferson	1900 ft. east		1891	1899	
		Sherbourne		1893	1903	
Lane s. of King. Lane between St.		End of lane		1895	1905	
Patrick & D'Arcy	Huron	Beverley	Cedar Bl'ck	1892	1897	
ane s, of Pearl.	Near Simcoe	<u> </u>	Cobble	1892		
wine e. of object	trange	St Patriels 1	• •	1892	1897	
lane s. of Pearl.	Simcoe	Vork		1892	1897	
and Victoria.	Gould	Wilton	• •	1887	$1897 \\ 1897$	
and Victoria.		106 ft. south		1892	1897	
and simicoe.		Near Adelaide	Cedar Bl'ek	1888	1898	
ane 1st n. of Q'n	Mutual	Jarvis		1888		
Cres.	Pembroke	George		1888	$\frac{1898}{1898}$	
ane bet. Queen (	Zhurch	East terminus	Cobble	1888	1898	

Street.	From.	То.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.	
Lane's of Oneen	Tecuniseth	Niagara	Cobble	1893	1898	
		Lane n. of Arling- ton Hotel.		1892	1898	
Lane e. of Bay	Wellington	214 ft. south		1888	1899	
		Melinda		1895	1900	
Lanen of Foxl'y	Foxley	135 ft. north	Codar Blok	1889	1899	
		Duncan		1889	1899	
		Bloor		1891	1896	
and Lippincott					10,00	
Lane rear Stand- ard Bank.			Scoria	1892	1902	
Lane rear Inland Revenue Office				1893	1901	
Lansdowne	Queen	Union	Gravel	1898	$^{-1}$ 1901	
Lansdowne	Dundas	Bloor		1889	1899	
		Colborne	Asphalt .	1895	1905	
		Ashbridge's Bay		1891	1901	
Linden	Sherbourne	Huntley	6.	1893	1901	
Lippincott	Nassau	College	Cedar Blick	1900	1905	
Lisear	Queen	College	Gravel	1897	1900	
Lisgar	Dundas	Afton	**	1898	1901	
		Crawford		1890	1900	
Looan Ave	Oneen	Ashbridge's Bay		1889	1898	
		Danforth		1889	1899	
		Esplanade		1899	1904	
		Roncesvalles		1892	1897	
McAlpine	Davenpert	McMurrich		1891	1897	
McCaul	Queen	College		1898	1903	
			Gravel	1898	1991	
		Defoe		1900	1903	
		Rathnally		1890	1900	
		Poplar Plains Rd.		1890	1901	
		1330 ft. west		1899	1904	
		Queen	Cedar Bl'ck	1889	1898	
Manning Ave .				1890	1900	
		College		1900	1905	
Mausfield	Clinton	Bellwoods		1900	1905	
Mansfield	Manning	Clinton	••	1893	1898	
Mansfield	Bellwoods	Grace		1893	1899	
Maple Grove	O'Hara	Brock		1899	1904	
Maple	Glen	Sherbourne	Macadam	1900	1905	
Marion	Lansdowne	McDonnell	Cedar Blek	1891	1899	
Markham	Herrick	Bloor		1889	1898	
		Queen	6.6	1891	1897	
		Farley		1887	1897	
Melbourne Ave.	Cowan	Dufferin	Gravel.	1897	1900	
Melinda	Yonge	Bay	Asphalt	1891	1899	
Metcalfe	Winchester	Amelia	Cedar Bl'ck	1900	1905	
Millstone Lane.	.York	East End		1889	1899	

Street. From.		To.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.	
Minnis Lane Murray	Wellington Caer Howell .	218 ft. north North End		1893 1898	1901 1903	
Nassau New North	Lippincott Davenport Rd St. Mary Queen	Lane Bathurst West End Bloor Afton Preston	  Macadam . Cedar Bl'ck	1891 1899 1889 1900 1895 1893	1896 1904 1899 1905 1900 1898	
O'Hara	Queen Bathurst Ontario Carlton Royce Bloor Harrison College Augusta	Railway tracks 1,455 ft. north Palmerston 270 ft. west Howard C.P.R. tracks C.P.R. tracks College Bloor Spadina Lippincott	Cedar Bl'ck	1892 1898 1893 1886 1890 1892 1892 1888 1900 1895 1899	1897 1901 1898 1896 1900 1898 1897 1899 1905 1900	
Pape Ave Parliament Parliament Peel Pembroke Peter Pinehill Rd Ponlett	Wellesley Queen Gladstone Shuter Bloor Front King Rosedale Rd Sydenham.	Dufferin Wilton	Macadam . Gravel Macadam . Cedar Bl'ck Cedar bl'ck Macadam . Cedar bl'ck	1900 1890 1887 1888 1899 1898 1899 1893 1886 1890 1894 1890 1889	1905 1899 1897 1895 1904 1901 1902 1898 1897 1900 1899 1896 1899	
QueenQueenQueenQueenQueenQueenQueen's Park Drive.	Pape	Pape	  Asphalt Macadam	1900 1900 1898 1898 1894 1894	1905 1905 1903 1903 1904 1903	
Richmond Richmond	Richmond Victoria Bay	East end	Cedar bl'ck Asphalt Macadam	1889 1886 1893 1897 1900	1899 = 1896 1901 1900 1905	

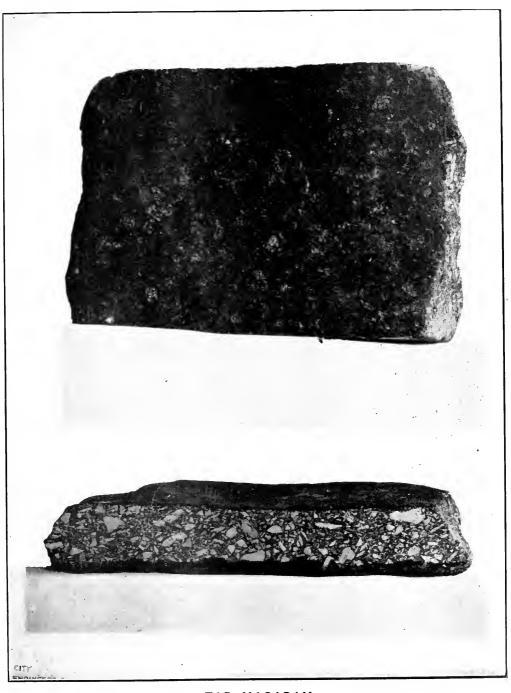
Street.	From.	То.	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
D. 1:	Dalmanatan	Euclid	Codar bl'ekt	1886	1896
Robinson	Dander	Grove	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	1899	1904
Roncesvalles	Ougan	Dundas		1890	1900
Roncesvanes	Unward	Winchester	Asphalt	1892	1900
Rose Ave	Pathanet	East end	Cedar bl'ek	1894	1899
Roseberry Ave.	V.mlr	East end	Cobble	1891	1897
Rossin H se lane	V	1,328 ft. west	Codar bl'ck	1892	1897
Roxborough Ave	Vonge	2,180 ft. east	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	1891	1900
Roxborough Ave	onge	2,100 ft. east		1893	1898
Royce Ave	Symington Ave	C. P. R		1890	1900
Rush Lane	Estner	Portland		1890	1900
Rusholme Ka	Hepnourne	Bloor		1899	1904
Russell	St. George	Spadina		10.74	1.704
		(A	Manulan	1898	1903
St. Albans	Surrey	Queen's Park	C. lon Ll'ok	1889	1898
St. Clarens Ave	. Wyndham	Dundas	Cedar bl`ck	1890	1900
St. Clarens Ave	Dundas	College	4 114	1891	1901
St. George	. College	Bloor	Aspnait	$\frac{1691}{1892}$	1899
St lames Ave	Untario	. Parnament		1898	1903
St. Patrick	Bathurst	Denison	Cedar bi ek	1895	1905
St. Patrick	Beverley}	. McCaul	Aspnatt.		
St. Marys	Yonge	W. end St. Mary	Macadam	$\frac{1900}{1899}$	1905
Sackville	. Gerrard	. Carlton	Cedar blek		1904
Sackville	Wellesley	256 ft. north	. Macadam .	1899	1904
Sackville	. Wellesley	. Winchester		1899	1904
Salishney Ave	Sackville	. East term	, Cedar blek	1886	1897
Scollard	Yonge	Hazelton	in track.	1898	1903
6	IZ	Collegno		1890	1900
Scott	, Front	. Colborne	Reight	1895	1905
Selby	. Sherbourne	. Huntley	Coder blek	1900	1905
Shaw	. Arthur	College	. Cedar in ck	1893	1898
Shaw	College	Bloor	•	1891	1901
Shaw	. Queen	. Defoe		1898	1903
Shaw	. Queen	Arthur		1890	1899
Shaftesbury Ave	. Yonge	1,100 ft. east	Magazian	1895	1899
Sheppard	Adelaide	. Richmond	Macadam	1891	1901
Sherbourne	. Bridge	South Drive	. Asphalt	$\frac{16.71}{1890}$	1899
Sherbourne	. King	. Queen		1889	1899
Sherbourne	. Queen	Bloor	() 1 1.11-1-	1891	1898
Shirley	. Brock	. St. Clarens	Cedar blick	1901	$\frac{1696}{1904}$
Shuter	Yonge	. Sherbourne	. Maca tani		1901
Simcoe	. Front	. Station	Cedar bl'ck	1896	
Simene	King	. Queen	Asphalt	1890	1900
South Drive	Crescent Rd .	. Searth Rd	Macadam	1893	1898
South Drive	e.s. South driv	ve Glen Rd		1899	1904
	running s.	L'inne		1900	1905
Spadina	Front	King	 Caday bl'ab	1899	1904
Spadina	Queen	Adelaide	Cedar brek	1891	1901
et a Mario Dal	Romard	UPB		1899	1901
Comman	River	Sumach	Macadam	1899	1904
Sully Cros	Shaw	Sully	Cedar bick		
Sumach	King	Eastern		1890	1899

Street.	From.		То.	Class of Pavement.	Date When Paid.	Date Final Assessm't Paid.
Sumaeli		Welles	ley.,	Macadam	1899	1904
Sumach				. Cedar bl'ck	1900	1905
Strickland Pl.				. Macadam	1900	1905
Sword	. Gerrard	Spruce			1899	1904
Temperance	Yonge	. Bay			1896	1899
Teraulay	. Queen	. Albert			1898	1903
Thompson	. Davies	$_{\odot}$ Munro		. Cedar bl'ck	1890	1900
Toronto					1892	1897
Trinity	. Mill	King .		. Cedar bl`ck	1900	1905
Tyndall Ave	. King	Springl	nurst	. Macadam	1898	1900
Ulster				. Cedar bl'ck	1900 1894	1905 1899
Vanauley	. Queen	. Grange			1886	1897
Vanauley	St. Patrick	. St. And	lrew		1887	1897
Victor Ave	Logan	. Broady	iew	Macadam	1899	1904
Vietoria	. Adelaide	. Queen .		Asphalt	1895	1905
Victoria Lane	Queen	. Shuter		Cobble	1890	1899
Virtue	Sorauren	. East Te	rm	Cedar bl'ck	1890	1900
Vietoria	King	. Adelaid	e	Asphalt	1892	1900
Vermont,	Palmerston	Mannin	g	Cedar bl'ck	1891	1896
Walmer Rd	Bloor	Lowthe	r		1897	1902
Walmer Rd	Lawther	Castle			1898	1903
Walton	Youge	Elizabet	h	Macadam	1902	1905
Wascana	Sumach	. 186 ft. e	east	Cedar bl'ck	1891	1896
Washington	Spadina	Huron.		Macadam	1899	1904
Wellesley Cres.	Sherbourne	. Jarvis .			1898	1901
Wellesley	Sumach		ast		1889	1899
Wellesley					1899	1904
	Sherbourne .			Asphalt .	1894	1904
Wellington Ave.	Bathurst	East ter	т	Cedar bl'ck	1891	1901
Wellington Wellington	Church	Longe .		Asphalt	1889	1899
Wellington	Day	1 OrK	C C	1.1 1.1 1.	1891	1899
West Lodge Westmoreland Ave.	Durham	. Pt. 1,14 . Union .	o it north	Cedar bi ck	$\frac{1899}{1890}$	1904 1900
Westmoreland	Bloor	Durham			1890	1900
Wilkens	King	North te	rm		1888	1899
Winchester	Parliament	Sumach		Asphalt	1893	1901
Withrow Ave	Broadview	1,060 ft	. east	Cedar bl'ck	1889	1898
Wolseley	Esther	Bathurs	t		1900	1905
Woolfrey	Broadview	Bowden		dam. Cedar bl'ek	1888	1899
	McDonnell			ii iii	1891	1899
Yonge	Grenville	Bloom		Authalt	1892	$\frac{1902}{1902}$
Yonge	King	Havros		азриши	1892	$\frac{1902}{1902}$
	ARIBIN ALLERAN	LIBYUUT			1002	1.00
Yonge	Hayter	Grenvill.			1892	1902



WITHROW AVENUE TAR MACADAM





TAR MACADAM



#### TAR MACADAM PAVEMENTS.

Last year certain changes were proposed, and during the past year carried into effect, whereby it was hoped that the life of tar macadam pavements might be prolonged. It was sought to select such sizes of broken stone for the wearing surface as would contain the least possible percentage of voids and yet permit of reasonable cheap construction. The period of maintenance guaranteed was extended from one year to three years, and it was predicted that the changes made would result in a pavement on which this period could be extended to five years. In the light of last year's experience, it is now considered safe to give this prediction effect, and accordingly specifications governing the construction of tar macadam pavements will hereafter provide for a five-year guarantee.

Great difficulty was experienced in obtaining tar and pitch of a uniform consistency. It was found to vary greatly, even in small shipments, so much so as to require constant watchfulness, and frequent changes in the proportions used. To obviate this difficulty, manufacturers of refined tar were approached with a view to the production of a product that had the required consistency without the necessity of mixing tar and pitch to obtain such, with its attendant complicated laboratory tests, during the construction of the work. Two manufacturers have assured us that this is quite possible, and are prepared to supply all our requirements at an advance in cost on semi-refined tar of only the cost of package.

The length of tar macadam pavements constructed during 1905 was 1.257, as compared with .920 miles constructed during 1904.

Included in the above mileage is a pavement which was called bituminous macadam. This is merely a more expensive tar macadam, carrying a ten-year guarantee for maintenance. Its construction was in all respects similar to that of tar macadam, except that the foundation course was blinded with finely broken stone and sprinkled with a mixture of tar and pitch similar to that used in the wearing surface, and greater care was taken in the selection and proportions of the various sizes of stone. For the wearing surface, of the mineral aggregate:

- (1) 30 per cent, was such as would pass a No. 40 sieve.
- (2) 12 per cent, was such as would be held on a No. 40 sieve, and pass a No. 8 sieve.

- (3) 10 per cent, was such as would be held on a Xo. 8 sieve, and pass a Xo. 4 sieve.
- (4) 18 per cent, was such as would be held on a No. 4 sieve, and pass a  $\frac{1}{2}$ -in, sieve.
- (5) 30 per cent, was such as would be held on a  $\frac{1}{2}$ -inch sieve, and pass a  $\frac{3}{4}$ -in, sieve.

Combined concrete curb and gutter, similar to that used in the construction of asphalt pavements, was tried for the first time last year in connection with far macadam pavements, and was found satisfactory. This form of gutter will hereafter largely replace brick which has heretofore been used. While the extremely low prices prevail for asphalt pavement, which carries a ten-year guarantee, the construction of tar macadam will be discouraged as much as possible.

In connection with tar macadam pavement, there was constructed during the year 1905, 6,048 lineal feet of combined concrete curb and gutter, 910 lineal feet of stone curb, and 1,785 lineal feet of concrete curb only.

Tables No. 1 and No. 8 show details.

#### MACADAM.

During the year there was constructed a total mileage of 3.373 miles of macadam roadway, as compared with 1.940 miles in 1904. This is an increase of nearly 74 per cent., and indicates the popularity of this class of roadway. Of the total mileage constructed in 1905, 2.069 miles was reconstruction of old macadam, and the balance, 1.304 miles, was either first or second-class macadam on streets that had been previously unimproved. Brick gutters are used where the grade is so steep as to cause the storm water to wash away the surface of the macadam roadway.

In connection with macadam roadways during 1905, 910 lineal feet of stone curb, and 7.833 lineal feet of concrete curb was constructed.

Tables Nos. 7 and 8 show details of macadam roadways.

#### CONCRETE PAVEMENTS.

Two concrete pavements were constructed during 1905, those on lanes running north and south from Shuter Street, first east of Yonge

# ESPLANADE GRANITE BLOCK



Street. Under such conditions of traffic as exist on these lanes, concrete pavements seem to be entirely satisfactory, being durable, easily cleaned, and therefore sanitary, and much cheaper than either brick or asphalt, and when laid with a view to prevent cracking and heaving, should be as permanent as either.

In 1905 a mileage of .055 miles was constructed, as compared with .053 miles in 1904.

# CEMENT CONCRETE WALKS.

In 1905 the high water mark was reached in the construction of concrete sidewalks,  $37\frac{1}{2}$  miles having been laid. This is an increase of 6.442 miles, or 20 per cent over the mileage laid in 1904, and 2.604 miles, or 8 per cent, more than was laid in 1903, which, until last year, held the record for the greatest amount of work done under the supervision of this Department.

Only one brick sidewalk was constructed, with a mileage of .031 miles. The total length of permanent sidewalks constructed during 1905, was 37.537 miles, and the total length in the City is now 187.206 miles.

The question of coloring the surface of concrete walks was investigated, and walks on both sides of Sheridan Avenue, north of Dundas Street, were colored red and grey, respectively, to test the result. 84 pounds of Venetian red to one barrel of cement, and one pound of carbon black to one barrel of cement was used for the purpose, and these quantities were found to give a pleasing tint. It is feared, however, that the color is not permanent, a perceptible fading being already noticeable.

In constructing concrete sidewalks, a length of 80,958 lineal feet of concrete curb was built in place during the year.

# DAY LABOR WORKS.

During the year 1905, 279 concrete sidewalks were constructed, of which 95 were done by day labor. Of these 5 were ordered by Council to be done by day labor, without the formality of calling for tenders. Four were taken from contractors on account of their dilatory methods of work, and the balance, 86 in number, were awarded to the City Engineer, he being the lowest tenderer. On 18 other walks the City Engineer's tender was also found to be lowest, but at the request of the next lowest tenderer he was allowed to do the work, under the super-

vision of this Department, and at the City Engineer's figures, thus effecting a substantial saving to the property owners. The walks constructed under this system aggregate 9.00 miles, as compared with 3.07 miles constructed in 1904.

In estimating the gain or loss resulting from the day labor system, if we take the lowest local contractor's tender as a basis of comparison on the walks for which tenders were invited, we find an actual gain of \$5.356.85 on an actual expenditure of \$34.699.03. The total cost of sidewalks constructed under the day labor system during 1905, exclusive of interest on money, was \$42.874.91, as compared with \$12.322.96 in 1904. While the mileage increased by 2.93 times the saving effected increased by 5.09 times when compared with 1904.

Table No. 9 gives lengths, widths, amount of City's tender, the next lowest tender, the actual cost of the work, and the loss or gain in comparison with contractors' tenders.

During the year we were awarded contracts by tender for the construction of 5 macadam roadways, 5 macadam roadway reconstruction, 1 tar macadam pavement, 4 brick on concrete pavements, 2 concrete curbs, and 1 grading. On these works a net gain of \$4,131.08 was effected, on an actual expenditure of \$44,412.81. Reconstruction of track allowance pavements, etc., brings the aggregate expenditure, exclusive of interest on the money, up to \$64,764.25. In 1904 the aggregate expenditure for like services was \$27,279.30.

Table No. 10 gives detailed information and statistics of these works.

A reference to Tables No. 9 and No. 10 will show a saving in favor of property abutting on the streets on which sidewalks were constructed by day labor during 1905, of \$5.356.85, and a saving due to the construction of pavements and roadways of \$4,131.08. In addition to these amounts, we also claim credit for a saving of \$1,199.20 on 18 sidewalk and 10 pavement contracts where our tenders were the lowest and which were accepted by the contractors at our figures, said saving being the difference between the City's tender price and the contractor's original tender. This total saving of \$10,687.13, I consider a reasonable vindication of the day labor system, which, by contractors is said to be a pernicious one. The cost of inspection, which is always incurred in contract works, and rendered unnecessary on day labor works, should also be placed to our credit. This would add \$1,740 to the credit column, being estimated at \$3 per day for the time allowed for the construction of day labor works.

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				6.0		68.0
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### DETAILED ANALYSES OF ASPHALTS AND ASPHALT MIXTURES, 1905.

					Mixture.	c Ce-		Re	fined A	sphalt.						San	d Grad	ing.					Du	st Gradi	ing.	
					Surface Min	Asphaltic Ce- s Machine.)	Physic Examins		Ch	emical	Analysi	8.	ei.	ve.	5	.e.	ve.	, ve.	, a	eve.	a,y,o		ve,		ove.	ove.
Street.	· From.	To.	Contractor.	Asphalt used.	Bitumen in Sur	Penetration of ment. (Dow's	Specific Gravity	Flowing Point.	Petrolene.	Asphalt ne am	Organic matter.	Inorganic matter.	On No. 10 Stev	Pass No. 10 Sie	Pass No. 90 Sie	Pass No. 30 Ste	Plyss No. 40 Ste	Pass No. 50 Siev	Pass No. 80 Sic	Pass No. 109 St	Pass No. 200 Si	On No. 50 Sieve	Pass No. 50 Ste	Pass No. 80 Sic	Pass No 100 St	Pass No. 200 St
Albam Ave Bornard Ave Bornard Ave Bauk Si Bornard Ave Bathurst St w.s Bathurst St w.s Bathurst St w.s Bathurst St y Bornard Ave Boarne St Cottingham St Loanionald St D Avey St Elizabeth st Gidler-bewe Ave Gidler-bewe Ave Gidler-bewe Ave Gidler-bewe Ave Girdler-bewe Ave Markham St Montiose Ave Markham St Montiose Ave Markham St Montiose Ave Markham St Ave Morkham St Ave York-ville Ave Lord Ave York-ville Ave Lord St Repairs on pave ments still unde gustantee. California Asphal Inspairs on pave California Asphal Inspairs on pave California Asphal Insentit "Price California Asphal	Bathurst 81 Samach 85 Queen 85 Duke 85 Lickeview Ave. Siv Patrick 81 Blood 81 Self first 81 Blood 81 Self first 81 Blood 81 McMunich 85 Rathindly Ave. Spadina Ave Spadina Ave Spadina Ave Spadina Ave Spadina Ave Spadina Ave Summerhill Ave. Tr	Walmer Rd, Sheridan Ave Kendall Ave Grenville St Grenville St King St Lovercourt Rd, Baldwin St Herrick SS 176 ft, south Dokvenjout Rd Poplar Plains Rd Dovercourt Rd Augusta Ave G T.R. Tracks Sorauren Ave Avenue Rd 789 ft, south	Constructing & Paving Co Warren's Bitummous P'g Co. Barber Asphalt Co. Constructing & Paving Co Barber Asphalt Co. Constructing & Paving Co Barber Asphalt Co.  Constructing & Paving Co Barber Asphalt Co.  Constructing & Paving Co Barber Asphalt Co.  Constructing & Paving Co.  Warren's Bituminous P'g Co. Warren's Bituminous P'g Co. Constructing & Paving Co.	Trinidad "Pitch Lake"  Trinidad "Pitch Lake"  California "Warren's Acme"  Trinidad "Pitch Lake"  California "Warren's Acme"  California "Warren's Acme"  California "Pitch Lake"  California "Pitch Lake"  California "Pitch Lake"  California Asphalt  California Asphalt	$\begin{array}{c} 11.08\\ 9.53\\ 10.05\\ 10.05\\ 10.05\\ 10.05\\ 10.05\\ 10.05\\ 10.05\\ 10.05\\ 10.05\\ 10.03\\ 10.00\\ 10.$	45° 35° 447° 284° 329° 537° 447° 347° 447° 37° 447° 37° 467° 385° 447° 386° 686° 686° 686°	1.2125 1.3792 1.3804 1.3872 1.3806 1.3804 1.3804 1.3805 1.3906 1.3792 1.3916 1.3927 1.3947	200° F 190° F 190° F 190° F 210° F 210° F 210° F 210° F 210° F	36.6 78.0 41.1 50.6 41.1 41.0 39.3 40.9 41.0 39.3 41.1 36.6 41.1 40.0	21.3 20.3 20.3 20.3 15.0 19.6 19.6 19.6 19.6 20.3 18.8 20.3 18.8	11.0 0 4 3 5 6 2 3 5 3 7 4 5 7 6 3 7 4 5 11.0	36.6 27.0 40.3 36.6 35.1 33.6 35.1 33.7 0.2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	05 05 10 20 20 20 25 05 05 05 05 05 05 05 05 05 10 10 05 05 05 05 11 05 11 10 10 10 10 10 10 10 10 10 10 10 10	0.5 5.5 2.0 1.5 5.5 3.0 2.8	5.0 14.0 14.0 10.5 11.2 3.0 11.5 14.5 14.5 14.5 9.0 9.0 4.0 4.0 8.7 14.0 14.			0,5 10,0 11 0 11 0 11 15 13,0 9,5 12 0 9,5 16,0 9,7 11,5 12,0 11,0 11,0 11,0 11,0 11,0 11,0 11,0	23.0 23.0 6.0 6.0 9.0 9.0 18.5 24.0 13.7 15.0 24.0 20.0 20.0 13.7 20.0 20.0 11.0 28.0 29.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21 0 21 0 13 5 6 0 0 0 6 0 17 5 4 5 4 5 2 3 3 4 0 15 0 15 0 17 0 29 0 10 0 10 0 17 0 29 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 1	26 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2.0 8.0 5.0 5.0 6.0 5.0 6.0 1.0 2.5 8.0 12.0 12.0 12.0 12.0 8.0 12.0 12.0 12.0 8.0 14.0 12.0 8.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	2.0	$\begin{array}{c} 8.0 \\ 28.0 \\ 18.0 \\ 4.0 \\ 12.0 \\ 24.0 \\ 16.0 \\ 26.0 \\ 24.0 \\ 26.0 \\ 24.0 \\ 26.0 \\ 24.0 \\ 26.0 \\ 24.0 \end{array}$	
Lake.	-0	1																								
			-		221 Tests.	52 Tests.										4	11 Tests	s.					+	1 Tests		

The phenomenal increase in the amount of work done by day labor during the year 1905, when compared with that of any previous year, can be traced in great part to the increased facilities provided for the inspection of the work under construction. In the spring of 1905, the purchase of an automobile was authorized and effected. In the light of last year's experience, this seems to be the true and wise solution of the problem. The machine was purchased for \$1,050, and the maintenance for the year, including repairs and garage accommodation, was \$256.17, or \$21.35 per month for 12 months, or \$36.60 per month for the 7 months in which the machine was in actual commission. During the same seven-month period, the upkeep of a horse and rig cost \$37.10 per month. This also includes the cost of repairs, which, if distributed over a twelve-month period would bring the cost down to \$35.65 per month. The expenditure for car fare was \$24 less in 1905 than in 1904

Table No. 7 shows in detail all the pavements, roadways, and permanent sidewalks constructed during the year. Table No. 11 shows mileage of concrete and brick walks annually constructed in the City from the year 1899 to the present time.

Table No. 12 gives in detail the number of local improvement works constructed from 1892 to 1905 inclusive.

### MAINTENANCE BRANCH OF THE ROADWAYS' DEPARTMENT.

In August, 1905, the maintenance and repair of roadways and sidewalks was transferred from the Street Commissioner's to the Roadway's Department. The following report covers the work done, and repairs made during the twelve months ending December 31st, 1905:

Many of the old macadam and gravel roadways have long outlived their natural life. Their reconstruction or renewal can be at best, but gradual and until new permanent pavements are constructed to replace these old roads, the problem of repairs is a difficult, unsatisfactory and expensive one, and one attended by greater expense and less satisfaction year by year. During the past year these old macadam roads, which were constructed many years ago out of the general funds, have been repaired as thoroughly as our appropriation would allow of, but many are worn out and are being superseded by a better class of pavement.

The following is a list of local improvement macadam roadways that have been repaired more or less, but not re-surfaced, together with the costs of repairs:

Street.	$\mathbf{From.}$	To.	Cost.
			*
rooklyn	Queen	Dagmar	15
ietor	Broadview		4
irst	13	_ 0	7
ogan	4.1		11
eGrassi			8
splanade	Yonge	Lorne	8
lomewood	Carlton		22
uchess	Sherbourne	T 1 1	4
erkeley		Wilton	6
uncan	Queen	Adelaide	3
enjson		Sr. Patrick	3
Vellington	Simcoe	Y 1	3
athurst	*****		6
athurst			7
Cellington	***		6
trachan	4.5.3	King	5
ansdowne		''	5
delaide		Bathurst	7
harles		Church	3
imcoe		4.4.7 4.4.4	4
	Esplanade		5
ay	Front		3
iver	Queen		21
umberland	Yonge	10.1	25
	Yonge	1	2
emperance		Queen's Park	$\frac{1}{2}$
t. Joseph	Yonge	Jarvis	4
			19
1:	Front		13
padina rock		127 1 22 2	3
			$\frac{3}{2}$
			18
avenport arvis		Queen	18
		Yorkville	7
ellair iver			29
	Queen	3.71	15
athurst			4
	St. Joseph		16
	Wilton Ave		27
	Yonge		10
	Queent		4
Post Office Lane	Adelaide		7

The pavements constructed as local improvements, which have been re-surfaced, are given below, together with the cost of each:

Street.	From.	To	Cost.
Anderson Langley	Simcoe	. 405 ft. south . McCaul . Logan . Parliament . Sumach . Mill	\$ c. 328 91 143 41 456 06 277 36 382 25 441 46

# GRAVEL ROADWAYS.

The undermentioned gravel roadways have been maintained in a safe condition by repairing from time to time, filling in ruts, etc.:

Street.	$\mathbf{From}$ .	To.	Cost.
Dunn [0	.}ueen	Huxley	29 - 1
Macdonnell	Ųueen	Garden	50 ]
Lansdowne	Marion	Union	11 8
O'Hara	Queen	North End	19 9
Melbourne 1	Dufferin	Elm Grove	42 1
Elm Grove[0	Queen	King	6 !
Brock I	Dundas	Florence	29 4
Peel I	Oufferin	Gladstone	6.9
Dufferin I	Oundas	Peel	43 2
AftonI	lisgar	Northcote	3 3
Lisgar	Jueen	Afton	6 9
Beaconsfield (	Jueen	Afton	25 9
Foxley	Dovercourt	Dundas	33 3
Crawford St. Extension (	Crawford	Montrose	18 5

The work in connection with unimproved roads consisted mainly of ditching and grading, together with a general supervision to keep them reasonably safe for traffic. The following is a list of those that were graded:

Street.	From.	Тө.
Dupont Greenwood Ave Fern Ave. Elm Ave Lumbervale Ave. Grace	Bay Walmer Rd. Queen Macdonnell Nanton Ave. Sorauren 400 ft. n. of College Queen	Bathurst Danforth Roncesvalles Hawthorne Easterly 500 ft. further north

### LAKE SHORE ROAD.

During the latter part of the year south-easterly storms worked considerable damage to the Lake Shore Road, undermining both it and the sidewalk for a distance of about 2,000 feet. An appropriation of \$2,500 was asked for, and made for the purpose of building a rubble protection wall. This wall will be built with the least possible delay.

### PLANK SIDEWAKS.

The annexed table is a list of all local improvement plank sidewalks constructed during the year:

LIST OF PLANK SIDEWALKS CONSTRUCTED AS LOCAL IMPROVEMENTS BY THE CITY ENGINEERS DEPARTMENT DURING YEAR 1905.

Total Cost.				55 45						647 23	86 18	995 GS	G 95 G 58 G 58 G 58 G 58 G 58 G 58 G 58 G 5	193 07	19 63	326 45		875 93		101 98	200
Nails.	Lbs.	35.	602	.c.	9	300	3335	957	207	902	100	007	006	903	500	200	000	900	190	를 등 당	900
Lumber.	Feet.	20,869	967.9	7.807	170.7	S,875	= x = x	15,908	13,494	24,319	3,179	200.7	o i i	6,784	999	11,851	13,910	14,504	3,435	Fosts, 5 ins.	10.955
Length.	Feet.	1,998	021	150	3335	200	£	1,192	1,265	1,434	863	789	5 5 5 5	929	ž	1,111	1,277	1,277	355	505	1001
Width.	Feet.	7	-: ::3	1.0		7	+	<del>-</del>	7	÷	+	<del>-,</del> -	+ -	+ +	7	7	7	7	7	7	7
To.		Годан	420 ft. east		Leuty	Violet		1,122 ft. south	Jones	1,434 ft. west	N. limit of No. 174	Ossington	Cost it, intriner south.	Shaw	419 ft. 8 ins. north	126 ft. w. Bartlett	West End	West End	Dovercourt Park	West End	1 147 (t. nourth
From.		203 ft. c. Broadview	Broadview	475 ft. e. Sumach	Lee	Queen	Queen	Queen	Pape	E.s. Bay	Davenport	Shaw	Chang	Miles Pl		Dovergourt	Dufferin	Dufferin	Shunly	Edwin	W Dundas
Side.		Z	Z	<i>x</i> :	: Z	: :	· :	:	: Z	ν.	<u> </u>	<i>x</i> :	ごン	: . : z	=	Z	· 7.	.Y.	:	: %	-
Street.		Diesen No. 1: Hogarth	Bain	Lamb	Violet	Lenty	Leuty	Waverley	Englewood	Division No. 3: Lake	Division No. 4: Bedford Rd	Division No. 5: Hallam	Charle Vale	Melville Ave	Division No. 6: Haxelock	Van Horne	Armstrong	Armstrong	Salem	William	Sterline Ld



### WOOD CROSSINGS.

The wood crossings throughout the City have received careful attention to maintain them in a safe condition for traffic.

There were 83 new wood crossings constructed by this Department during the year.

# RETAINING WALL—YONGE STREET.

By order of Conneil, a retaining wall was constructed under the supervision of this Department, on Yonge Street, at the intersection of Severn Street, as a protection to the roadway at this point. The cost was as follows:

Labor	. \$599 80 200 21
Material	. 500 24
	\$900_04

# PLANK SIDEWALK EXTENSIONS.

Plank sidewalk extensions have been constructed by this Department, at the request of individuals, and for which there has been received, and paid to the City Treasurer, \$277.87.

The amount received on miscellaneous accounts and paid to the City Treasurer, was \$109.65.

### STREET OPENING PERMITS.

These permits are issued to builders, contractors and others desirous of removing temporarily a portion of the sidewalk. During the twelve months, ending December 31st, nine of these permits were granted, a deposit of \$10 being exacted in each case, and held as security until the sidewalk was properly restored.

### STREET NUMBERING.

The above service has been a very important one during the current year. The large number of new buildings erected has necessitated a great deal of attention. On several streets the erection of new houses on heretofore vacant property caused considerable confusion in the numbers.

The agitation for a better system of street numbering than has

existed heretofore, culminated in the passage of a By-law legalizing the renumbering of several streets, the block system of street numbering to be adopted.

I beg to draw attention to the necessity of increasing this appropriation, and to provide in the Estimates a sum sufficient to number the dwelling in the district known as Kew Beach, consisting of the streets west of Balsam Avenue.

### PUBLIC CONVENIENCS.

The public conveniences situated at St. Andrew's Market; Queen Street, opposite Dundas Street; Queen Street west, at the intersection of King Street; and at St. Lawrence Market, have received daily attention to maintain them in a sanitary condition, and it is gratifying to learn that practically no complaints have been received this year in that connection.

### EXPRESSMEN AND CABMEN'S SHELTERS.

The shelters erected for the benefit of cabmen and expressmen, situated on Richmond Street, west of Yonge Street; Station Street; Esther Street, south of Queen Street; and Markham Street, north of Queen Street, are all in fairly good condition, there being no complaints registered against them.

During the latter part of the year the shelter which was situated on Jarvis Street was removed to Lombard Street, east of Church Street.

### RAMP FOOT OF JOHN STREET

During the year a ramp was constructed at the foot of John Street for the purpose of loading scows to the Island. This ramp was built at a cost of \$506.61.

### STREET OPENINGS AND EXTENSIONS.

By order of Council the following streets were extended: Fern Avenue, Atkin Avenue, Piper Street, Elm Avenue, Lumbervale Ave, Pearl Street, Hickson Street.

### CITY WHARF ROADWAYS.

By order of Council two new roadways were ordered to be constructed, one alongside of the first freight shed west of Bay Street, and the other on the east side of the new Turbinia dock. These works were undertaken and completed under the supervision of this Department.

### SNOW REMOVAL—SIDEWALKS.

During the winter, 1904-5, which might be mentioned as a very severe one, snow was removed from 2,273,634 lineal feet of sidewalks, representing over 430 miles. The cost of removing the snow was assessed against the property fronting which the sidewalks were cleaned, the cost being \$11,395.19.

The rate per cleaning, per foot frontage was five mills, the details being as follows:

Ward.	Miles.	Feet.	Cost.
1	85	4,710	\$2,268 73
<u> </u>	24	251	~650_01
3	119	1,938	516 28
4	54	3,302	1,446 09
5	104	4,766	2,769 - 70
6	141	4.107	3,744 38
	430	3,234	\$11,395 19

### AVENUE ROAD ANNEXATION.

During the current year Council approved of the annexation of that tract of land situated north of St. Clair Avenue, extending (approximately) 3,600 lineal feet northerly, by 1,850 feet in width. This new section required a great deal of attention, and necessitated a large amount of expenditure during the year.

### HOUSE OF INDUSTRY STONE.

The casual inneates of this institution broke, approximately, 730 cubic yards of stone during the past season. The amount of stone delivered to this institution during the year 1904-5, was 130 toise. The cost of this stone being \$1,365,32, and the cost of teaming, sledging, and measuring amounted to \$246,67.

Respectfully submitted.

W. M. MACPHAIL,

Assistant Engineer.

TABLE No. 7.
ASPHALT PAVEMENTS.

Street.	From.	To.	Width. Lin. Ft.	Length. Lin. Ft.
Albany Ave Bernard Ave Bank Bernard Ave Bathurst (w.s. only) Bathurst (w.s. only) Bathurst (w.s. only) Bathurst (w.s. only) Bothurst (w	Walmer Rd Bloor College College Rathnally Ave Yonge McCaul College Bathurst Sunnach Queen King Lakeview Ave St. Patrick Bloor College 524 ft. s. of King Bloor McMurrich Rathnally Ave Yonge Delaware Ave Spadina Ave Bloor Macdonnell Ave Yonge	Bloor one 608 ft. south. Poplar Plains Rd . Church St . Spadina Ave . Grenville . Palmerston Ave . East End . Duke . Dovercourt Rd . Baldwin . Herrick . 600 ft. north . 176 ft. south . Follis Ave . Davenport Rd . Poplar Plains Rd . 429 ft. east . Dovercourt Rd . Augusta Ave . Van Horne . Soiauren Ave .	side only 24 21 24 24 24 24 28 29 20 24 24 24 21 21 21 21 24	1,349 256 472 256 3,238 3,209 608 483 963 1,664 210 594 401 835 267 420 176 1,632,6 376,6 723,9 429 264 757,6 3,177 766 1,965 789 28,531.;
	Вкіск Ра	VEMENTS.		
Commercial Lane Fraser Ave Hagerman Lane 1st w. of Y'k Mechanics Ave Osler Ave Pacific Ave Preston Ave Phipps	Wyndham Royce Ave Atlantic Ave Bloor		10 to 24 20 10 to 20 24 24	211 461 219 185 416 968.9 893 330.6 405.3

TABLE No. 7.
Asphalt Pavements.

Pavements		Curb.		Complete		Contractor.
Sq. Yds.	Width. Lin. Inch.	Length. Lin. Ft.	Class.	Complete	stt.	Contractor.
$3,503 \\ 689$	5	2,692	Concrete	July 3, 1 July 3, 1	905 905	The Barber Asplt Pg. Co.
1,104			Concrete	Inly 26, 1	905	The Con. & Pav. Co.
685	5	465	"	Sept 7 1	905	The Con. & Pav. Co.
4,200	6	3,216	6.	Oct 5 1	905	The Con. & Pav. Co.
4,163	6	3,197				The Warren Bit. Pav.Co.
1,640	5	1,280	44	Nov 29 1	905	The Barber Asp'lt Pg.Co.
	5	976				The Con. & Pav. Co.
$\frac{1,140}{2.671}$	5	1,960				The Barber Asp'lt Pg.Co.
2,671	.,	1,500		Nov 17 1	905	The Con. & Pav. Co
4,571	5	330	Congrets	Aug.10, 1	905	,, ti
566	5	1,295	Concrete	Dec. 2, 1		44
1,540	. 5 5	802		Inno 1 1	905	The Barber Asp'lt Pg. Co.
805	6			Aug. 24, 1		The barber rap is a g. oo.
3,867	6	$1,662 \\ 554$		Aug. 24, 1		
1,314	0	554		June 9, 1		6.
1,122		1 021	le.	Oct. 4, 1		
1,980	5	1,854	Concrete			The Con. & Pav. Co.
2,927	5 5	1,744				The Con. & Fav. Co. The Barber Asp'lt. Pg.Co
1,628		$\frac{1,252}{386}$				The Darber Aspite 1 g.co
501	5			July 4, 1 Aug. 3, 1		
4,690	5	3,352		Aug. o, I	1005	The Con. & Pay. Co.
927		1 110	(1	. July 27, 1	1005	The Con. & Tay. Co.
1,741	5	1,442	Concret	e Aug.22, Sept.21,	1005	
1,003	5	858		Sept.21,	1005	
604				1		
2,025				. Sept. 8,		
8,770	5	6,465	Concret	e Not comp	1005	
1,786			(1	Oct. 16,	1005	
5,580	5	3,964	Concret	e June13,		
3,454	+ 6	1,507	••	Sept. 19,	1909	The Warren Bit. Pav. Co
71,196	1	41, 253			,	
			Brick Pa	VEMENTS.		
651	5	159		e Aug.12,	1905	Day labor.
1,294	5	930	4.6	June22,		
500	5	433	* * *	Aug.11,	1905	The Godson Con. Co.
436	5	225	4.4	June12,	1905	John Maguire.
828	5	848	6.6	July 3.		
2,675	5	1,964	"			The Tor. Con. & Pav. Co
2,450	4	1,788	Stone			Day labor.
904	5	693	Concret	e July 18,	1905	John Maguire.
677	ā	810		Aug. 17,	1905	Day labor.
10,415	-	6,062	Concre	te		
,		1,788	Stone.			

# Vetrified Block,

Street.	From.	To.	Width. Lin. Ft.	Length. Lin. Ft.
Front	Church	. Bloor	35 to 20	$ \begin{array}{r} 3,045 \\ 700.9 \\ 789.6 \\ \hline 4,535.3 \end{array} $

### BITULITHIC PAVEMENTS.

499
1
1,464
1,251
648
649
792
-2,430
633
267
8,633

# Macadam Roadways.

				Ì
Agnes	Yonge	University Ave	30	1,904
Caroline Ave			24	958
Crocker Ave			. 24	473
Dufferin			24	3,424
Edward			24	1,837
Elizabeth			24	3,373.6
Jefferson Ave			24	187
Molson			20	313.9
Sterling Rd				-1,145.6
Sparkhall Ave			22	380
Teraulay	Albert	College	30	-2,875.6
Wellesley	Yonge	Church	35	936,9
				17.808

### VITRIFIED BLOCK.

Pavements		Curb.	Completed.	Contractor.
		Length. Lin. Ft. Class.	Completed	
9,686 4,800 3,328	6		Oct. 17, 1905	The Con. & Pav. Co. John Magnire. The Tor. Con. & Pav. Co.
17,814		7,628		

# BITULITHIC PAVEMENTS.

1.292	5	982	Concrete	July 13,	1905 Th	e Warren	Bit. Pay.	, Co.
3,488	5	2,936		Sept. 9,				
3,531	5	2,565		Nov 27.				6.6
1,706		_,						
1,291				July 18.	1905		4.4	4.4
2,565	6	1.566	Concrete	Ang. 26.	1905			6.4
3,884	5	4,959		Nov. 1,		6.6	4.6	
2,324	5	1.266	i .	July 8,			4.	4 -
1,016	4	192	Stone				* *	
	-	14,274	Concrete					
24,097		192	Stone					

### . Macadam Roadways.

6,600	5	516 Oct. 20, 1905 Day labor.	
2,561	5	1,915 Concrete July 3, 1905 J. Macguir	÷.
1,446	5	173 "Dec. 11, 1905 Day labor.	
9,659		C'd o'r till' 06 The Godsor	: Cont'g Co
5,192			
9.358	5	6,459 Concrete C'd o'r till '06	
499	5	374 " May 30, 1905 "	
776	5	758 " Oct. 19, 1905 "	
2,765	õ	226 " Aug. 16, 1905 - "	
936	5	810 " Sept 19, 1905 "	
1,082		Dec. 14, 1905	
3,643	5	1,874 Concrete May 16, 1905	
44,517		13,105 Concrete	

	TAR	Mac	ADAM	ROADWAYS
--	-----	-----	------	----------

Carlaw Ave   Queen   Eastern Ave   24					
Ehm Ave	Street.	From.	To.		Length Lin. Ft
Crawford   Bloor   River   The Bridge   25   25   25   25   25   25   25   2	Elm Ave Grace Hawthorne Ave Lamport Ave Sumach Vanauley Virtae	Huntley College Dale Ave Crescent Rd King Queen Sorauren Ave	West End	. 24 21 24 . 18 to 58 . 24 . 20 . 19	951 236,0 474 842 439 418 1,190,9 314 1,773
Cepar   Concrete   Concrete   Concrete   Concrete		CEDAR BLOC	K ON SAND.	1	
Bathurst	Gerrard Lansdowne Ave	River Dundas	The Bridge	$\begin{array}{c} 25 \\ 21\frac{1}{2} \end{array}$	1,755 578 327.3 660.6 3,320.9
Concrete		Cedar Block o	on Concrete.		
Concrete.  Lane 1st e. of Yonge Shuter					515 2,124
Lane 1st e. of Yonge Shuter					2,639
Granite Sett.		Coxer	ETE.		
Granite Sett.					155 133
					288
Esplanade Scott Berkeley 25 to 35 3,4		GRANITE	Sett.		
	Esplanade	Scott	Berkeley	25 to 35	3,497

Payments		Curb.				
Sq. Yds.	Width. Lin. inch.	Length. Lin. Ft.		Comple	ted.	Contractor.
2,539 718	5	473	Concrete	Sept. 7,	1905	The Con. & Pay. Co.
$\frac{1,106}{2,635}$		273		June27,	1905	The Godson Con. Co.
856	4	910	Concrete	Sept. 2,		The Godson Coll. Co.
1.045		884	Concrete	June24.	1905	
2,679				July 8,		The Con. & Pay. Co.
664	5	628	Concrete			Day labor.
3,741	อ้	5,575	. **	Nov.22,	1905	The Godson Con. Co.
15,983		7,833 910	Concrete Stone			
		Сеп	ar Bloch	on San	D.	
4,095 1,657	4 5	3,361 727	Concrete	Sept. 23,	1905	The Godson Con. Co. The Con. & Pav. Co.
1,934	5	1,489	Concrete	Dec. 11, Oct. 24,	1905 1905	Day labor. The Tor. Con. & Pav. Co
7,686		$(2,216 \ (3,361$	Wood .			
		Серан	в Вьоск е	on Concr	ETE.	
2,312 5,061	6 4	1,021 4,492	Stone	Sept. 15, Nov. 21,	1905 19 <del>0</del> 5	The Con. & Pav. Co. The Tor. Con. & Pav. Co
7,373		5,513				
			Concr	ETE.		
329 325				July 24, Aug. 31,	1905 1905	A. Gardner & Co. The Con. & Pay. Co.
654						
			GRANITE	Sett.		

### WOOD ВLOCK.

Street.	From.	To.	Width.	Length.
York St. Bridge Yonge and Queen (Intersection)				120 66 186

### GRADING.

Grace Leuty Ave			500 644
		ļ	1,144

# TRACK ALLOWANCE—RECONSTRUCTION.

Dundas Between bridges King Subway approaches. Queen Yonge College	(Devil strip) River	7.3 to 3.6 3 5	$1,151 \\ 5,112.3$
Tonge Conege	D1001		$\frac{2,667}{9,457.3}$

### NEW TRACK ALLOWANCE.

Queen w.s. Woodbine Ave. East City limits	4,088
Yonge u.s. S'm'erhill Ave. 789 feet south 6 6	789
	4,877

### Wood Вьоск.

Pavement. Sq. Yds. Brick. Vitrified Scoria. Block. Scoria.
Sept. 1, 1905 Day labor. Nov. 20, 1905

### GRADING.

3,842 c.yds.	Sept. 20, 1905 John Hartnett.  June 12, 1905 Day labor.

### TRACK ALLOWANCE—RECONSTRUCTION.

	*			
142	 337	Oet. 23,	1905 Day	labor.
674	 1,151	Oct. 19,	1905	
1,988	 4,815.9	296.6 May 31,	1905	6.6
1,111	 	2,857 June 9,	1905	**
3,915	6,303.9	3,153.6	i	

# NEW TRACK ALLOWANCE.

5,865	4,088	Laid over till J. H. McKnight.
569	789	
6,434	4.877	

### CONCRETE CURBING,

Street.	From.	To.	Side.	
Argyle	Dundas	Dovercourt Rd	South	
	. Youge			
	Centre Ave			
	Centre Ave			
	Spadina Rd			
Bank	Dufferin	Sheridan Ave	. South	
'arlaw Ave	Queen	Eastern Ave	. East	
Defoe	McDonnell Sq	. Tecumseth	. Both	
	Bloor			
	Teraulay			
	Lakeview Ave			
	650 ft. n. of Dale A			
	Avenne Rd			
	Albert			
	Albert			

# PRIVATE CONCRETE SIDEWALKS.

-					
No.	Street.	From.	To.	Side.	Width.
2	Wellington Pl	a pt. w. of Spadina:	A point further west		
3	Portland	a pt. n. of King	A point further n'th	West	
-4	Yonge	Орр. No. 1152			
5	Yonge & Cottingh	am, opp. Bank			
6	Chestnut	N. from Agnes		East	
7	George	Opp. Frankel Bros.	No. 109		
8			No. 109 No. 120		
9	Dundas	Opp. 611, 613, 615 .			
10	Queen	Close Ave	A point west	South .	
11	Queen	Opp. 363 and 365 .		1	
12	Church	Carlton	A point north	West	
13	Dominion	Dufferin	Westerly	North	
14	Front	Church	A point east		
15	Yonge	$\Theta_{ m pp}$ , 1212, 1214, 1216	A point east		
16	King, opp. Car Ba	rns (St. Ry. Co.) .			
			A point south		
19	Barton Ave	Bathurst	A point east	South	
20	Yonge	Opp. Eaton's			
21	Grace	Arthur	A point north	west	
	[		1	1	ı

### Concrete Curbing.

Width.	Length.		Comple	eted.	Contractor.
inches.	933		June 10.	1905	The Tor. Con. & Pav. Co
 5 5	$\frac{738}{212}$		Aug. 8,	1905	The Grant Con. Co.
 5	212		July 31.	-1905	
 5 5	$\frac{256}{472}$ .		July 21,	-1905	The Barber Asph. Pav. Co The Con. & Pav. Co.
 5 5	951 422		May 26.	-1905	The Tor. Con. & Pav. Co
 5 5	$\begin{vmatrix} 3,478 \\ 1,180 \end{vmatrix}$		Oct. 3.	-1905	A. Gardner & Co. Day labot.
 5 5	420 192		May 17, Oct. 24.	-1905	The Barber Asph. Pav. Co Day Jabor.
 5 5	633 1,825		June 30	.1905	The Warren Bit. Pav Co The Grant Con. Co.
 5 5	2,748		Nev. 3,	1905	1110 (7111111111111111111111111111111111
	14,672				

# PRIVATE CONCRETE SIDEWALKS.

Length.	Cu	rb.	  -   Completed.	Contractor.
	Class. Length.			
Feet.				1
84				Private.
13				
32				4.6
27.3				
48				
62				
8				
11				6.6
53.6				4.6
25				6.6
37.9	1			
52				1 66
23	1			
317.5				
50.3				
277.5				
247.8				6.6
244				
70	1		1	
76	1			6.6
120.2				6.6

PRIVATE CONCRETE SIDEWALKS-Continued.

	1			
Street.	From.	To.	Side.	Width.
Street.	r rom.	10.	Side.	W ICCII.
22 Arthur		A point west		
23 Queen		A point west		
24 Strachan Ave	Queen	A point south	West	
25 Yonge	Opp. No. 199 N'wB'k Dale Ave	A point north	Foot	
26 Nanton Crest	Duke	A point south		
27 Frederick	Opp. Cowan's Co			
29 Bloor,	Shaw	A point 63 feet west		
30 Sherbourne	Esplanade	13.3 north	West	
31 Pearl e.e. in rear of				
32 Front	Opp. No. 42		North	<b></b>
33 Yonge Opp	St. R.R. Sub St'n			l
34 King, opp, Warwick	Bros. & Rutter			
35 Mutual	South of Wilton Ave		East	
36 King	From No. 399			
37 Spencer Ave	No. 85	No. 103	4.6	
38 Yorkville Ave				
39 Simcoe & Adelaide				
	Roncesvalles Ave			
41 Soranren Ave		Loan & Saving Co	NT	
42 Ulster	Palmerston Ave			I
43 South Ave	West Ave	Tiverton Ave	1	
44 O'Hara Ave				
45 Defoe ,			North	
46 Whitesides Pl	3.7	A pt. 99 ft 6 in east	1	
48 Youge	. Yonge	36 ft. north	East	
49 Collier	Yonge	100 ft. east		
50 Berkeley	The second second			
51 Balsam Ave		A pt. 137 ft. east		
52 Yonge		$10\overset{1}{2}$ ft. south	East	
53 Yonge				
54 Portland	. King	118 ft. north	West	
55 King	Strachan Ave	Wellington Lane .	North	
56 Preston Ave	. No. 543	No. 545		
57 Ulster				
58 Bathurst	Queen			
59 Yorkville Ave	. Upp. car barns			
60 Esplanade	. Sherbourne	Frederick		
61 Afton Ave		A	E	
62 Church		A point south	'Last	
63 Shuter	King	A point east A point 76 ft. south	West.	
64 Jarvis 65 Trinity	. Mill	A point south	East.	
	Mill		West	
	Bloor		East	
				]
1	*			

PRIVATE CONCRETE SIDEWALKS--Continued.

ength.	Cu	rb.	Completed.	Contractor
	Class.	Length.		
Feet.	1 1			
85.6			I	'rivate.
71.3				* *
73.5	1			
46.5	1			6.6
62.4				4.4
131	,			
119.4				
63				
13.3				
132.4				6.6
33	1			44
112.4				66
45				
183				4.
204.5		• • • • • • • • •		
359.4				
79				
297.2				
310.3				6.6
205				6.6
147				6.6
241				
353				**
358				6.4
89				6.6
99.6				
46.8				6.6
107				
65.4	1			6.6
137				"
102				
49.5				
131				
146.8				
252.8				
27.2				
98.3				
100				
292.5				
18				
106				
117				
76.4				
316				
269				
120.5				••
	1	1	1	

# PRIVATE CONCRETE SIDEWALKS-Continued.

No.	Street.	From.	To.	Side.	Width.
69 Go 70 Vic 71 Du 72 Bet 73 Gra 74 Spa 75 Bea 76 Av 77 We 78 We 79 We	ald	Victoria Victoria Victoria Gould In front of Fire Hal  At NE. Cor Opp. Baldwin run  Opp. 64 & 66 Opp. 61 Opp. 72	Gerrard ning east	North East West West West West	

### Concrete Sidewalks.

Street.	From.	To.	Side.	Width.
Arthur Adelaide Adelaide Aberdeen Audley Belmont Barton Ave. Barton Ave. Berkeley Beverley Bathnrst Brunswick Ave. Bismark Ave. Bismark Ave. Berok Ave. Berdere	York Church Parliament Pape Ave. Mc Murrich Euclid Ave Palmerston Ave. Albany Ave. 120 ft. n. of Queen. College Arthur Ulster Harbord Park Rd Chesley 166\frac{1}{2} ft. n. of Arthur College	Francis 441 ft. west 306 2-3 ft. east Davenport Rd. Manning Ave. Euclid Ave Bathurst Sydenham Cecil Wolseley Bloor Bloor 463 feet east 227 ft. n. of Cobourg 233½ ft. fur. north 111 feet north.	South South North North North North North North West East West West West	Ft. In. 6 8 6 3 7 5 5 5 5 6 6 6 4 5 5 5 7 6 5 5 6 6 6 4 5 5 7 7 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6
Bellwoods Ave Blong Ave Bellevue Ave Beatty Ave	Pape Ave Bellevne Pl	305 feet east Oxford	South West	5 5 5

# PRIVATE CONCRETE SIDEWALKS—Continued.

Length.	C	urb.	(1) 11 (1)	
	Class.	Length.	Completed.	Contractor.
Feet.	1	1	i	
607.4		1	<b></b>	. Private.
601.8				
583.6				
50				
185.2				
25				1
29		1		
721				4.
417	1			
64				
33				
69.4				6.
327				
12,087.5	_			

### Concrete Sidewalks.

Length.	Curb.			G t
	Class. L	ength.	mpleted.	Contractor.
Feet.		Feet.		
1,630		May	2.1905	The Godson Con. Co.
576		Aug		A. Gardner & Co.
463		Aug		The Queen City Pay. Co.
440	5-in. concr.	440.4 Ang		The Grant Con. Co.
309,2	1	309.2 Aug		The Ontario Con. Pay. C
668		Apri		Harvard & Leach Pay, C
284		3.7		Day labor.
297		Apri		
297	5 in. coner.	271 May		
353		353 May		The Queen City Con. Pay.C
626				The Excelsior Pay. Co.
1,542		Aug.		Day labor.
1,890		July		The Excelsior Pay, Co.
1,294		July	27, 1905	66
490		July	25, 1905	Day labor.
538		Aug.		
232		Ang.	16, 1905	* 6
111		Aug.	11, 1905	Harvard & Leach Pay, Co
1.771		1.7		The Excelsior Pay. Co.
309.3	5-in. concr.	309.3 Aug,		4.4
976		962 Aug.	25, 1905	The Godson Con. Co.
1,177	1	,177 Sept		Harvard & Leach Pay. Co

# Concrete Sidewalks-Continued.

Street.	From.	To.	Side.	Width.
				Ft. In.
Birtle Ave	Dundas	430 feet west	North	5
Berrymau	Davenport Rd	Hazelton Ave	North	5
Berryman	Davenport Rd	Hazelton Ave	South	5
Baldwin	Spadina Ave	Angusta Ave	North	5
Bellevue Pl	Bellevue Ave	West end	North	5
Badgerow Ave	Pape Ave	557 feet east	South	4
Barton Ave	Brunswick Ave	Howland Ave	North	5
Bernard Ave	St. George	Huron	North	5
Badgerow Ave		25 ft. fur. east	South	4
Bernard Ave	St. George	Huron	South .	5
Beatty Ave	King	Queen	East	5
Brunswick Ave	Clster	Harbord	East	6
College	McCaul	$305\frac{1}{2}$ feet east	South	8
Crawford	Queen	Defoe	West	5
Columbus	Sorauren Ave	West end	North	4
Crawford	King	Queen		5
Crescent Rd	Rosedale Rd	Park Rd		4
Callender	Queen	700 ft. n., thence 40	E. & N.	5
		ft. west		
College	· · · · · · · · · · · · · · · · · · ·	$287\frac{1}{2}$ feet west	C	8
	Church	Jarvis	South	5
Close Ave	King	Springhurst Ave	West	5
Castle Avenue	The second secon	Walmer Rd		3 6
	Mansfield Ave	College		5
	Balmuto	North		5
College			North	6
Chose Ave		Huxley		5
Concord Ave		Bloor	East	4½
Carlton		Sackville		5
Cottingham		Poplar Plains Rd	North South	4
Cumming Duke	Sherbourne	Wardell		5
		Argyle	West	8 to 10
Dundas Dundas				6
Dagmar	44 ft. n. of Queen	56 ft. n. of Rebecca Jones		5
Delaware Ave		Hepbourne		5 5
Dorset	King	Wellington		4
Dundas	Bloor	N. City Limits		6
Dupont	Huron			5
Duchess	Jarvis	George		6
Dufferin		N. City Limits		5
Dagmar Ave	Pape Ave		South	5
Delaware Ave	College		Fast	5
Dupont			1	5
	Hepbourne			5

# Concrete Sidewalks—Continued.

	Curb		0	lotad	Contractor.
Length.	Class.	Length.	Comp	oleted.	
12		Feet.			
Feet. 445	5-in, coner.	439	Sept.	14, 1905	The Grant Con. Co.
660	**	660	Aug.		Day labor.
666		666	Sept.	20, 1905	
758			Oct.	12, 1905	The Crescent Con. Pav. Co.
480			Oct.	16, 1906	The Warren Bit. Pav. Co.
559	5-in. concr.	559	Nov.	8, 1906	Day labor.
290			Nov.	11, 190	Day labor.
355	5-in. concr.	348	Nov.	0. 1005	The Warren Bit Pav. Co.
25		25	Nov.	90, 190	5 Day labor.
376	**	361	1 -	97 190	5 Harvard & Leach Pay, Co.
1,183		1,183	Sept. July	15 190	The Excelsior Pay. Co.
607			April	90 190	5 The Crescent Con. Pay. Co.
316			April	05 100	5 The Grant Con. Co.
683		398	May	9 190	5 The Crescent Con. Pav. Co.
398	5-in. concr.		May	9 190	5 The Grant Con. Co.
1,103			May	5 190	5 The Crescent Con. Pav. Co.
571			May	-17, 190	5 The Excelsior Pav. Co.
729					
~			May	-19, 190	5 Day labor.
335	5-in, coner.	649	June	-8, 190	5 The Excelsion Pay. Co.
$651 \\ 1,338$			July	-18, 190	5 The Crescent Con. Pav. Co.
$\frac{1,356}{258}$	5 in coner.	258	July	26, 190	Day labor.
566	1.6	566	Aug.	5, 190	Harvard & Leach Pay. Co.
353			Aug.	16, 190	5 The Queen City Pav. Co.
378			. Sept.	14, 190	<ul><li>Day labor.</li><li>The Excelsior Con. Pav. Co.</li></ul>
1,353			. Oct.	4, 190	5 The Crescent Con. Co.
807	5-in. concr.	807	Oct.	10, 190	5 The Grant Con. Co.
645		629	Nov.	0. 100	55 W. R. Payne.
500			Nov.		)5 Day labor.
312		co.t	May	8, 196	
612	5-in. concr.	604	June	8, 19	
217			June	1 19	05
285		737	July	11 19	05 A. Gardner & Co.
737	5-in. concr.	1,848	Aug.	92 19	of The Excelsion Paying Co.
1,971		1,040	1	97 19	05 The Warren Bit, Pay. Co.
426			Aug.	31 19	o5 The Crescent Con. Pav. Co.
2,494			. Sept.	. 1, 19	05 Queen City Con. Pav. Co.
$\frac{925}{277}$	5-in. concr.	270	Aug.	24, 19	05 Day labor.
$\frac{277}{3,294}$	()-III. COHOT.	3,378	Sept.		O5 A Gardner & Co.
5,294 277	**	278	Sept.	2.2 16	705 The Ont. Con. Pay. Co.
936		932	Sept.	. 23, 19	005 The Excelsior Pay. Co.
216	**	200	Sept		005 Day labor. 005 The Concretes, Lt'd.
802	1	802	Sept	. 13, 19	705 The Concretes, Lt a. The Ont. Con. Pav. Co.
2,318		2,318	Oct.	7, 19	THE OHE. COR. 1 are
-,-	l .		1		

Concrete Sidewalks-Continued.

Street.	From.	To.	Side.	Wie	lth.
					In.
E 0 1			117	Ft.	m.
De Grassi	'Queen	Gerrard	West	5	
Dufferin	Dominion 794 ft.	n.of S.S. Mississauga		5	
D'Arcy	. Beverley	Spadina Ave	South	$\frac{5}{a}$	
	, Yonge		B	6	
Dufferin	College	Lindsay Ave	West	5	
Dermot Pl	Carlton	Spruce	West	3	6
Dupont	. Walmer Rd			5	
	Sherbourne		North	$\frac{6}{6}$	
Eastern Ave	Trinity	Sackville	North	5	
Eastern Ave	Trinity	Cherry	South	5	
Elm	Teraulay	Elizabeth		6	
	Huntley			5	
Elm Ave	Glen Rd	Dunbar Rd		5	
Exhibition Walk				8	
				8	
Exhibition "			$ 3 \ldots \ldots  $	6	
Exhibition "			4	8	
Edward	Terauley	Centre Ave	South	5	
Esplanade	Jarvis	. Berkeley	North .	6	
First Ave	Broadview Ave	. 71 ft.n.of BoltonAve	South	5	
Front	Spadina Ave	. $ 201rac{1}{4} $ east of Bathurs	North	5	6
Front	John	. Spadina Ave	North	5	6
	Cherry	. Vime	South	5	
	Dundas		North	5	
Fern Ave	Sorauren	. Macdonell Ave	North	5	
	, Queen	Humbert	West	5	
	Queen	Humbert	.   East	5	
Givens	College	361 ft. south	. B		
	College		East	5	
Gerrard			. South	5	
Givens			. West .	5	
	Queen	, Bruce	. East	$\frac{1}{2}$ 5	
Gerrard		(1)	North	4	
	Parliament				
Golden Ave					G
Gerrard	Bridge	. Broadview Ave	. North	. 6	
Grange Ave	Beverley	. Spadina Ave	. South	. 5	
Glen Rd		. South Drive	. West	. 5	
	Vietoria			. 6	
Grace	494 ft. n. of Colleg	ge 500 ft. further nort	h B	. õ	
Gerrard	103¾ ft. e. of Hov land Rd.	Logan Ave	. North .	. 5	
Gladstone Pl	Gladstone Ave	. 180 ft. east	. North .	. 4	
George					
Graham	Lansdowne Ave .			. 4	- 6
Gore	Clinton	. West End	South .	. 5	
.5.40					

Concrete Sidewalks—Continued.

Feet. 2,342 661 1,079 1,885	Class.	Length. Feet. 2,342		ıplet	ou,	Contractor.
2,342 $661$ $1,079$ $1,885$		2,342				
$^{^{\prime}661}_{1,079}_{1,885}$						
$\frac{1,079}{1,885}$		(1)	Oct.	30,	1905	The Ontario Con. Pay. C
1,885		GG1	Oct.	4,	1905	The Crescent Con. Pay. C
		1,072	Oct.	23,	1905	The Warren Bit. Pay. Co
			Nov.	- 8,	-1905	The Excelsior Con. Pav. (
319	5-in. concr.	319	Oct.	23,	-1905	Godson Con. Co.
415		415	Nov.	$^{2}$	1905	The Crescent Con. Pav. 6
320	4.4	320	Nov.	23,	1905	Day labor.
105			April		1905	
467			April	14,	1905	The Crescent Con. Pav. C
705			June	13,	-1905	W. R. Pavne.
334			June	24,	-1905	The Warren Bit. Pay. Co.
231			July	22,	1905	Harvard & Leach Pay. Co
277			Aug.	14,	1905	The Concretes Lt'd.
474			Ang.			The Excelsior Con. Pav. C
650			Aug.		1905	
662			Aug.			Day labor.
536			Nov.	23,	1905	The Excelsior Con. Pav. C
834			Nov.	2.	1905	The Grant Con. Co.
1,574			Nov.	20,	1905	Ont. Concrete Paving Co.
752			June		1905	
1,827	5-in. coner.	1,827	July			Harvard & Leach Pay. C
1,309			July	21,	1905	The Warren Bit. Pav. C
1,021			July			The Godson Con. Co.
916	5 in. coner.	923	Aug.	22.	1905	The Ontario Con. Pav. C
781			Aug.	$\frac{25}{25}$ ,	1905	Toronto Con. & Pay. C
661	5-in, coner.	661	Sept.	23,	1905	W. R. Payne.
662	**	660	Nov.			Concretes Limited.
722			April			The Grant Con. Co.
485	5-in, concr.	485	May			The Harvard & Leach (
1,831	o in conten		May	17	1905	Toronto Con. & Pav. (
$\frac{2,773}{2}$			June	10	1905	Crescent Con. & Pay. Co
496	5 in. concr.	496	May		1905	
711	44	711	June			The Queen City Pav. Co.
326	4.	310	June	15	1905	Day labor.
660	4.	660	June	93	1905	A. Gardner & Co.
760		*****	July	3	1905	Day labor.
1,098	5-in. coner.	1,052	Sept.	13	1905	The Warren Bit. Pav. C
554	o-m. concr.	1,1472	Sept.	117,	1905	Day labor.
136			Sept.	90	1005	The Ontario Con. Pav. C
1.001	5-in. coner.	1.001	Oct.	17	1005	Day labor.
346	J-III. Conct.		Oct.		1905	
180	5-in. concr.	180	Oct.	4	1905	Crescent Con. & Pay. Co
381	o-m. concr.	2,	Oct.			Day labor.
307	5-in, coner,	307	Oct.		1905	Day labor.
301	J-ta. conci.		Nov.		1905	

# CONCRETE SIDEWALKS—Continued.

Street.	Street. From.		Side.	Wie	dth.
				124	In.
ći <b>i</b>	L'athon	91 ft. west	North	ът. 5	111.
Grange Ave			South .	5	
Hoskin Ave	St. George	145		5	
Harvard Ave	Callender	Roncesvalles Ave	North	5	
Harvard Ave		Dundas	South	5	
Halton			East	5	
Howland Ave	Dupont		North	5	
Halton	Shaw		North	5	
Harbord	Manning Ave		West	5	
Hawthorne Ave		Clinton	North	5	
Harbord	Queen		West	3	6
Hammersmith Ave .	1-5	600 ft. north	East	5.	U
Hawthorne Ave	v To		South	5	
Hayter	1		East	5	
Havelock	College Grange Ave	les were a se	West	5	6
Huron Huron	and the second s	142\frac{1}{2} ft. south	West	5	6
	Durant	N. City limits	West	5	,
Howland Ave			East	4	6
Howard Ave	1.2		North	4	0
Jemima Lauria			West	11	6
Jarvis John		Queen	West	5	6
John Jones Ave		Gerrard	West	5	.,
		$60\frac{1}{4}$ ft. e. of John	North	8	
King		Argyle	West	5	
Lisgar	Arayle	Afton Ave	West	5	•
Logan Ave			East	5	
Lee Ave	10	mm	East	4	
Lamport Ave		450 feet east	North	4	
Louisa			South .	5	
Louisa	Teraulay		South	5	6
Lansdowne Ave		108 feet north	East	5	
Lansitowno iiici	Wallace Ave.				
Markham	Herrick	Bloor	West .	- 5	
Manning Ave		815 n. of Harbord	West	5	
Morse	Queen		West	5	
Morse	Terror	ern Ave.			
McMurrich	Davenport Rd		West	5	
May		3831 feet north	West	4	
Manning Ave	Arthur		East	5	
McAlpine	McMurrich		North	4	
Munro	C.		West	4	6
Mutual	Wilton Ave.	0	West	5	
McMaster Ave		322 feet east	North	5	
McMaster Ave		Avenue Rd	South	5	
Melinda	26 ft. w. of Yonge		North	7	2
Memica					

Concrete Sidewalks—Continued.

Length.	Curb.			1 . 4	o.d	Control
Length.	Class.	Length.	Con	ıplet	ea.	Contractor,
Feet.		Feet.				
112			Nov.	4,	1905	Day Labor.
1,106			May	31,	1905	The Excelsior Pay. Co.
995			June	21,	1905	Toronto Con. & Pay. Co.
1,026			July	- 3,	1905	Constructing & Pay. Co.
611	5-in. concr.	601	July	31,	1905	Ontario Con. & Pav. Co.
244			July	17,	1905	Day labor.
621.9	5-in. concr.	633	July	19,	1905	The Ontario Con. Pay. Co
905	**	800	Aug.	4,	1905	Day labor.
649	+ 4	649	Sept.	13,	1905	
293	**	257	Sept.	9,	1905	6.6
151		151	Oet.	õ,	1905	6.6
600		600	Oct.	5,	1905	The Warren Bit, Pay, Co.
341		341	Oct.	13,	1905	Day labor
168		$16\overline{0}$	Oct.		1905	
351			Nov.	20,	1905	W. R. Payne.
152			Nov.	16,	1905	
245			Nov.	16,	1905	Crescent Con. Pav. Co.
957	5-in. concr.		June	5,	1905	The Ontario Con. Pay. Co
272	6.6	259	May	13.	1905	The Crescent Con. Pav. Co
419	6-in, concr.	440	July	4.	1905	The Queen City Pav. Co.
688	5-in. coner.	688	Aug.	17.	1905	The Warren Bit. Pay. Co.
897		597	Oct.	9.	1905	W. R. Payne.
700			May			Day labor.
988	5-in. concr.	988	Aug.		1905	
483	4.4	483	Ang.		1905	
1,397		1.427	Aug.			The Ontario Con. Pav. Co
767			Sept.	16	1905	A. Gardner & Co.
452			Sept.	13	1905	Day labor.
75			Sept.	25	1905	The Crescent Con. Pay. Co
346	5-in. coner.	334	Sept.	27	1905	" " " " " " " " " " " " " " " " " " "
108			Oct.			Day labor.
				10,	11,170	Day labor.
843			June	3	1905	
472			June			W. R. Payne.
2,122	5-in. coner.	2,122	July			Day labor.
840		874	July	1.1	1905	 The Warren Bit. Pav. Co
405		0, 1	July	11	1905	Day labor.
1,527	5-in, coner.	1,527	July	99	1905	Day labor.
371	S-III. CONCL.	371	July			The Constitute & Dun Co
557		597	July	99	1005	The Const'cting & Pay, Co
620			July	18	100≈	The Queen City Con. Pav. Con. Pav. Con. Pav. Con. Pav. Con.
339	5-in. concr.	322	Aug.		1905	Day labor.
653	o-m. coner.	632	Aug. Aug		1905	
53		1).>=	July			The Const'cting & Pay. Co

# Concrete Sidewalks-Continued.

Street.	From.	To.	Side.	Width.
				Ft. In.
Mitchell	Tecumseth	Niagara	South	5
Mutual	Gerrard		East	5
Manning Ave			West	5
Morley Ave	Queen		East	4
Mutual	Queen	Shuter	East	5
Maple Ave	Dale Ave	440 ft. north & west		6
MacPherson Ave	Rathmally Ave	292 ft. west	North	õ
MacPherson Ave		276 ft. west	South	5
Mutual	Wilton Ave	Shuter	East	5
Montrose	College	land a second		5
Nassau	Spadina Ave	Lippincott	North	5
Nassau	Bathurst	Augusta Ave	South	5
North Lisgar	Afton Ave	Dundas	West	5
Niagara	Tecumseth	King	N. & E.	5
Nanton Cres	Dale Ave	Elm Ave	West .	5
Natalie	Logan Ave	Verral Ave	South	4
Orchard	Huron	110 feet west	South	3
O'Hara Ave	Marion	650 feet north	West	5
Orde	Murray	McCaul	North	4
Ossington Ave	Arthur	College	East	6
Olive Ave	Avenue Rd	E. City limits	North	5
Oak.,	Parliament	Sumach	South .	ā
Ontario	Duke	[198] ft. north	West .	5
Palmerston Ave	Bloor	London	West	5
Palmerston Ave	College	Bloor	East	6
Peter	King	1444 ft s of Adelaide		6
Parliament	King	Queen	West	5
Parkview Ave	) v	175 ft. north	East	4
Parliament	King	Queen	East	5
Pearl	York	Simcoe	North	6
Portland	King	Queen	East	5
Palmerston Ave	Bloor	London	East	5
Pembroke	Wilton Ave	Gerrard	West .	5 6
Parliament		41 ft. s of Wilton A.	West	ಕ
Portland		Queen	West	5
Queen	178 ft. west of Knox		South .	5
Queen	Simeōe	Duncan St	South	10 6 to
		70 St 6 NT 1 11	N (1	11 6
Queen	Sorauren Ave	59 ft w of Macdonell		11
	Sack ville		South	6
	Sumach		South	6 5
Rusholme Rd	Hepbourne	452 ft. s. of Dewson		5
			East	4
Richmond			North	6 5
Rathmally Ave		McMaster Ave	East	5 5
		670 ft. north	West	5 5
Robert	Harbord	D100f	West	Ð

## Concrete Sidewalks-Continued.

Length.	Curb.	Cor	nplet	ed.	Contractor.		
nengen.	Class. Length.						
Feet.	Feet.						
801		., Sept.			The Toronto Con. & Pay.Co		
700	5-in. coner. 696	- Sept.			The Queen CityCon.Pav.C		
1,080	1,080	Sept.			Day labor.		
582	577	Oct.	,	1905	the state of the s		
552	., 545	Oet,			The Excelsior Con. Pav. C		
452	427	Oet.			Day labor.		
326		Oct.		1905			
276	12	Oct.	27,	1905			
418	5 in. coner. 400	Oct.		1905	į		
581				1905			
1,589	5-in. coner. 1,645	May			The Grant Con. Co.		
1,161	1,101	June		1905			
865	909	July			The Const'cting & Pay. Co		
801		T.			Day labor.		
783	***************************************				The Warren Bit. Pav. Co		
460	5-in. coner. 434	Nov.			Day labor.		
$\frac{109}{687}$	E i			1905			
	5-in. coner. 687	May		1905			
398					W. R. Payne.		
1,856	5 in a new 20				The Godson Con, Co. The Grant Con. Co.		
$\frac{628}{1,365}$	5-in. coner. 628	Sept.			Crescent Con. Pav. Co.		
$\frac{1,305}{266}$	$\begin{array}{c} 1,365 \\ 266 \end{array}$	Oct. Nov.		$\frac{1905}{1905}$			
503	510	April			Day labor.		
3,071	910				Toronto Con. & Pav. Co		
277			29,		Day labor,		
1.008	5-in. concr. 1,008	June	22,	1905			
187	3-m. concr. 1,095	. June		1905			
1,027	5-in. cener. 1,027	June		1905			
511	3-in. coner. 1,027	. Aug.			The Grant Con. Co.		
1,161	5-in coner. 1,151	Sept.			W. R. Payne.		
503	503	Oct.			Harvard & Leach Con. Co		
963					Excelsior Con. Pav. Co.		
860					Day labor.		
714	5-in, coner. 714	Sept.	15	1905	W. R. Payne.		
2,826	o in. concr.				Excelsior Con. Pav. Co.		
542			17,		Harvard & Leach Pay, Co		
598	5-in_coner. 598	Aug.			W. R. Payne.		
237		. Aug.			A. Gardner & Co.		
642					Crescent Con. Pav. C .		
1,494					W. R. Payne.		
958	5-in. coner. 958	June			A. Gardiner & Co.		
554	554	June			Harvard & Leach Pav.		
333	·				Day labor.		
663					The Warren Bit. Pay. Co		
1,311		. June	27.	1905	Crescent Con. Pav. Co.		

CONCRETE SIDEWALKS-Continued.

			1		
Street.	From.	To.	Side.	Wid	th.
				Ft. I	- En
River	Queen	Mark	East	5	
Reid's Lane			West	5.9	
River		Queen	East	5	
Roden Pl	MeMurrich		South	3 7	
Rose Ave	94 ft n of St. James Ave.		East	5	
Rathnally Ave	MacPherson Ave	35 ft. south	East	5	
Russell	Huron	150 ft. west	South .	6	
Sumach	1	Winchester	West	5	
St. Patrick	. Beverley	Larch	1	5	
South Drive			South	4 6	
South Drive		Park Rd	South	4.6	
Spadina Ave		$200\frac{1}{9}$ ft. north	West	6	
St. Patrick	. Casimir	Bathurst	North .	ā	
Sherbourne			East	6	
St. Patrick	. Denison,	Casimir	North	5	
Spencer Ave	. King	Huxley	West	ã	
Sheridan Ave	. Dundas		East	4	6
	S.) and Wellington Pl		W. & S	6	
Stafford		$103\frac{1}{5}$ s. of King	East	5	
Strachan Ave., 10 ft	n. of s. Lm't of R.R.	of W., 604 ft. south	West	5	
Sussex Ave	. Brunswick Ave	Robert	South	- 5	
Sackville	. Queen	Eastern Ave	West	4	6
Sussex Ave	Huron	Spadina Ave	North .	- 5	
Simcoe	Adelaide	King	West	- 8	
St. George	Lowther Ave		East	- 6	
Sheridan Ave	Dundas	$472\frac{1}{2}$ ft. north	West	4	6
Sumach	. King	Eastern Ave	East	5	
St. Thomas	Sultan	Bloor	West	5	
Spadina Ave	90 ft.n. of St.And'ws	93 ft. north	West	11	6
St. Thomas	Czar	Bloor	East	5	
Sherbourne	Elm Ave	South drive	West	' 6	
Sparkhall Ave	Broadview Ave	380 ft. east	North	5	
Sackville	St. David	Wilton Ave	East	5	
Spencer Ave	King		East	5	
St. David		934 ft. w. of Sumach	North .	อ	
Sullivan		Spadina Ave	South	5	
Sussex Ave			North	5	
Shuter		Sherbourne	South	5	
Teraulay	Albert	Walton	West	6	
Trinity Sq	120 ft. w. of Yonge	Trinity Sq., run'g s.			6
Triller Ave			East	5	
Triller Ave	. Queen	Harvard Ave	West	5	
Temperance	. 1596 ft. w. of Yonge	$40_{12}^{7}$ ft. further west		9	
Temperance	173 <sup>3</sup> ft. e. of Bay		South	9	
Tiverton Ave	. First Ave	South Ave	East	4	
		1	[	,	

## Concrete Sidewalks—Continued.

Length.	Cu	ırb.	Con	plet	ted.	Contractor.
	Class.	Leugth.		1		1
Feet.		Feet.				
1.147			Sept.	7.	-1905	Crescent Con. Pav. Co.
113	5-in. coner.	113	Sept.			Day labor.
F30	6.6	133	Sept.	-8,	1905	Crescent Con. Pav. Co.
243	**	243	Sept.	14,	-1905	The Queen City Pav. Co.
457			Oct.	10,	1905	
70			Oet.	28,	1905	Day labor.
171			May		-1905	
479			April	25,	1905	W. R. Payne.
786			May	4,	1905	The Grant Con. Co.
345			May			Day labor.
167			April	19,	1905	
215			May	3,	1905	
448	5-in. coner.	448	May		1905	
435			May	15,	1905	The Harvard & Leach Co.
388	5-in. concr.	373	May		1905	
1,476			July			Crescent Con. Pav.
763			Aug.			Day labor.
307			Aug.			The Con. & Paving Co.
311			Aug.			The Tor. Con. & Pav. Co.
585	5-in coner.		Aug.			The Grant Con. Co.
514			Aug.			Harvard & Leach Pay. Co.
1,103	5-in, coner,	967	Sept.	25.		The Warren Bit. Pav. Co.
487			Aug.	25,		Harvard & Leach Pav. Co.
194			Aug.	31.		Godson Con. Co.
130			Sept.	9.		The Crescent Con, Pav. Co
471			Sept.	20.		Day labor.
408			Sept.	,		The Concretes, Lt'd.
212			Sept.	30,		Queen City Con. Pav. Co.
93			Sept.	25.		The Tor. Con. & Pav. Co.
483	5-in, coner.	466	Oct.	<b>5</b> .		Queen City Con. Pav. Co.
359			Sept.	27,		The Warren Bit. Pav. Co.
382			Sept.	$\frac{1}{28}$ .		Day labor.
416	5-in, coner.	416	Nov.	2,		The Tor. Con. & Pav. Co.
1,006			Nov.	18.		A. Gardner & Co.
576			Nov.	16.		Queen City Con. Pav. Co.
1,963			Nov.	2.	1905	Day labor.
222			Aug.	22		Harvard & Leach Pay. Co.
675			Nov.	6,		Day labor.
1,556			April		1905	
106	5-in. concr.	106	April	27.		
511	5-in. concr.	1.50	April	25.		The Crescent Con. Pay. Co
482			April	$\frac{25}{27}$ .	$\frac{1905}{1905}$	
41	6-in. coner.	41	June			Harvard & Leach Pav. Co.
65	o-m. coner.	65	June	24.		
759		(), )	July	24, 11.		Day labor.
100	1		July	ш,	1 909	Day 14001.

## Concrete Sidewalks-Continued.

Street.	From.	To.	Side.	Wi	dth
				124	1.
Temperance	Bay	Easterly	South	- Ft. - 9	In
Tecumseth				5	
Tecumseth			West	5	
Tecumseth	King	Wellington		5	
Turner Ave			N. wel.	4	
Victoria		Comment.	North	5	6
Victor Ave	Remarking Av.	Logo Ver	West	5 5	0
Virtue	Samuella Ave	305 ft. east		3	6
Wells		E. valall An	South	- 5 - 5	е
Wilton Ave	1761 a of Danking	Kendan Ave	South .	5 5	
Winchester	Ontonio	D	North	**	
Wellesley	Vanco	Church	North	ã.	
Winchester	Motoule.	Church	North	6	
West Ave	Lime V.	Sackville	South .	5	
Wallaslar Di	Wallandar Charle	South Ave	East	4	
Wellesley Pl Wilton Cres	102 ft 5 in	et . t		4	
witton cres	Pembroke	onerbourne	South	6	
Walton		Paymalay	S61.	~	
Wright Ave	MaDavall Aga	Samuel Variable	South	5	
West Market	King	70 fr & in and	E	5	
Winchester	Parliamont	192 foot on t		10	
		417 feet east	South	14	
				6	
realistic real	Ave.	Dupont	East	ð	
Wellington Ave		68 feet west	South		
Walmer Rd	Laurthan Ven	Courtle And	South	6 5	
Wilton Ave.	Powlinder	Oastie Ave			
Walmer Rd	250 ft v. of Possous	Day	North .	6	
Walmer Rd	Ave.	Dupont	West	ā	
Yonge		1503 6 4	157	1.1	
		1564 feet north	West	11	4
		168 ft. 8 in. south $85\frac{1}{2}$ feet north	West	11	0
ronge	Memma	oog teet north	West	10	6
					_

Crescent Rd	Rosedale Rd	Western limit of No. 63	South .	4

	Cos	CRETE SII	EWALK	s-C	ontin	ned.
	Cur	b.				
Length.	0.11	.,,	Con	plet	ed.	Contractor.
	Class.	Length.		1		
	016.103.	r.en_un.				
Feet.		Feet.	-			
78	6-in. concr	78	July	18,	1905	Day labor.
444	5-in. coner.	434	Aug.	14,	1905	
245		245	Sept.	13,	1905	The Tor. Con. & Pay. Co
454		441	Sept.		1905	
250	**	232	Sept.			W. R. Payne.
604	6.6	608	Sept.	30	1905	The Ont. Con. Pav. Co.
1,966		1,70	Sept.			The Crescent Con. Pay. C
329			Sept.			Day labor.
330			Nov.		1905	Day labor.
1,200		1,192	Nov.			W D D
$\frac{1,200}{295}$			Nov.	10	1005	W. R. Payne.
939				10,	1905	The Warren Bit. Pav. Co
			Oct.	18,	1900	W. R. Payne.
432			Oct.	14,	1905	The Queen City Pav. Co.
757			Oct.	12,	1905	W. R. Payne.
350			Sept.	28,	1905	Day labor.
589	5-in. concr.	576	Aug.	31,	1905	Day labor.
711			Sept.		1905	
801	5-in. concr.	801	Aug.	19,	1905	The Crescent Con. Pav. C
77	6-in. concr.	77	Aug.		1905	
122			July	25,	1905	A. Gardner & Co.
417			July	14.	1905	
610	·		July			The Grant Con. Co.
68	Y		July	4.	1905	Day labor.
585	5-in, coner.	570	May	27	1905	Harvard & Leach Pay, C
301				10	1905	Day labor.
74			June	30,	1905	The Crescent Con. Pay. C
153			July	97	1905	The Const eting & Pav. C
177					1905	
92					1905	
188,957	• -	2,024		·		
· · · · · · · · · · · · · · · · · · ·			Siber	A' 4 T T		
		DATE	· OTHE		•	
195	1			26	16.05	Day labor.

TABLE No. 8.

Remarks.	Heavy	Light. On 4 in, concrete.	On 6 in.	None laid in 1905.	** **	On 6 in. concrete.	On 4 in.	On gravel.	None laid in 1905.		13 in. in depth.	s in s		
Per sq. yd., Per sq. yd., Averave east	5 13 30 31	- 6 - 6 - 6 - 6 - 6 - 7	398 5				1 25			33 33 33	1 17	22.0	1 45	
Minimum cost per sq. yd., 1905.	% - 0 5:	% S. 	9 30	:		:	:	:			1.13	09 0	1.37	:
Maximum cost per sq. yd., 1905.	% 21 € 21	99 T 31	<u>‡</u>			:	:	:	:	:	1 25	88 C	1.57	:
pavement. Gustanteed period of yrs.	=		100	1G	10		:	-	_	- -		-		=
mumixsIV to obsay	5. E.	9.50 5.50	:		:	3.73	:		:	-	1.20	:		10.94
Year first laid.	xx xx	1893	:	1839	1890	1881	:	:	1880	1881	:		1900	<u>:</u>
m bist səfiM .G001	9.40	3.75	:	:	:	1.13	:		:	1.26	3.37	:	1.25	1.63
Square yards Goef ni bial	71,196	37,351				15,059				14,474	44,517		15,983	24,097
Total miles in City.	57.50	16.23		845	2.218	55,46			5.83	2.58	57.93		5,45	3.15
 Total sq. yds. in City.	995,800	954,523		15,031	35,000	675, 164			76,862	60,938	679,158		73,109	48,367
Class of Pavement.	Asphalt	Brick on concrete	Brick (blk.) "	Brick on broken stone	", gravel	Cedar Block	***************************************	" " " " " " " " " " " " " " " " " " " "	Gravel	*Scoria and granite	Macadam	***	Tar macadam	Bitulithic

\* Street railway track allowance not included in total mileage. † Blinded with tarred gravel.

TABLE No. 9. GIVING MILEAGE OF CEMENT, CONCRETE AND BRICK SIDEWALKS CONSTRUCTED IN THE CITY OF TORONTO.

Year.	Cement Concrete.	Brick.	Total.
p to 1889	1.190		1.190
1890	1.426		1.420
1891	1.950		1.950
1892	1,508		1.508
$1893\ldots$	2.253		2.259
1894	1.137		1.137
1895	1.918		1.918
1896	0.612	0.204	0.816
1897	1.050	0.820	1.870
1898	2.107	1.190	3, 297
1899	5.470	0.290	5.760
1900	15.227	0.038	15.265
1901	17.305	0.511	17.816
1902	27.360	0.049	27,409
1903	34.896	0.098	34.989
1904	31.058	0.001	31.059
1905	37,500	0.037	34,947
Totals	183,973	3,233	184.616

TABLE No. 10.

CONCRETE WALKS CONSTRUCTED BY DAY LABOR, 1905.

			1		5r.
Street.	Side.	From.	То.	Width in ft.	Kind of Curbing Constructed with Walk.
Baldwin Barton Ave Bernard Bernard Bernard Berryman Berryman Berryman Berryman College College College Commings Duke Duchess Dundas	XXXXXWWX8X8 BEXXXX8XXE W	Palmerston Enclid Bathurst Brunswack Woolsle, 166 ft. north Arthur. St. George St. George Davenport Rd. Davenport Rd. Fire Hall Park Rd	Manning Albany Howland Arthur 223 ft. further n. Huron Huron Hazelton Driveway 463 ft. east 227 ft. n. Cobourg Spadina Rd .287½ ft. west Dufferin Wardell Outario Jarvis .56 ft. n. Rebecca	$\begin{array}{c} 4 \\ 5 \\ 5 \\ 6 \\ 5 \\ 6 \\ 5 \\ 5 \\ 5 \\ 6 \\ 6$	Concrete
Dupont Dupont Dundas Elm Ave. Exhibition Euclid Ave George Gerrard Gerrard Gerrard Glen Rd Gore Grace Graham Grange Harbord Havelock	X X X X X X X X X X X X X X X X X X X	Fire Hall Sherbourne 3 Administration Bldg Ulster Duchess Pasliament Bridge 103\(^1\) ft. east Howland Elm Clinton 494 ft. north College Lansdowne Esther Markhan Manning	323 ft. west Driveway 92\(^2\) ft. west New Arts Bldg. Herrick Queen Berkeley Broadview Logan South Drive West End 500 ft. further n. Macdonell 91 ft. west Manning	5 5 6 8 8 6 6 5 6 5 5 5 5 5 5 5 5 5 5 5	Concrete Concrete Concrete Concrete

TABLE No. 10.

Concrete Walks Constructed by Day Labor, 1905.

<del>-</del>					= :	<u>-</u>
City's Tender per lin, ft.	Next lowest Ten der per lin. ft.	Cost of work not Included in Tender.	Cost of Work In- cluded in Ten- der.	ord Cost of Work Exclusive of Interest on Money.	dal Cost of Work Based on Contractors' Lowest Tender.	Difference B'tween City's
a e r	_ <del>_</del>	ost of work Included in Tender.	품든 -	Total Cost. of Work Exclusiv of Interest on Money.	tal Cost of Work Base Contractors Lowest Ten	Cost and
1119	r li	ed	\$ E	물줄 요.	Total Cost of Work Base Contractor Lowest Ter	Next Lowest
£ £	2 2	e E e		경폭 불위	E # E 8	Contractor.
~x =	문동	125	est o clud der.	otrl Cost Work E of Inter Money.	4.5 6 6	
£.	_ §	\$ = E	% T €	3 7 E M	13 × 5 -2	Gain Loss
		<u> </u>	<u> </u>			
*S e.	8 c.	\$ c.	8 c.	ŝ с.	⇒ e.	\$ c.
64	64	73 37	461 60	534 97	534 97	23 52
63	69	38 14	183 66	221 80	242 72	20 92
63	69	6 04 56 22	$\frac{184}{255} \frac{90}{61}$	190 94	201 72	10.75
1 07	1 15		$\frac{255}{179} \frac{61}{52}$	311 83 211 43	367 64 None	55 81
None 75	None 77	$\frac{31}{46} \frac{91}{47}$	1,129 70	1,073 17		160 40
62	67	5 44	153 33	158 80	$\begin{array}{r} -1,238 - 57 \\ -161 - 21 \end{array}$	2 41
1 05	None	56 36	352 43	408 79	None	12 45
1 05	110116	45 02	328 77	373 79	240116	68 28
1 00	1 10	116 37	557 66	674 03	841 82	167 79
96	1 00	146 35	589 03	755 38	812 25	76 97
None	None			382 45	None	
54	57	33 87	233 86	267 73	312 99	45 26
61	64	88 56	328 - 32	416 88	432 88	16 00
70	84	3 30	199-55	202 85	220 27	17 42
1 05	1 43	64 - 01	320-25	384 26	543 06	58 80
74	83	16 - 20	289 93	306 13	329 94	23 81
55	60	8-43	187 - 46	195 89	195 93	()4
1 05	1 07	207 94	557 - 19	765 13	854 00	88 87
1 08	1 10	159/55	284 87	444 42	455 67	11/25
80	85	3 47	189 - 55	193 02	245 46	52 - 44
∫per sq. (ft. 16	∫ per sq.	7 43	263 - 28	270 71	365-76	95-05
} per lin. ft. 95		15 - 66	140 75	156 41	235 33	78 92
1 00	None	94 53	317 - 95	412 48	None	2.05
None				278 84		
84	87	4 48	88 39	92 87	95 65	2.78
75	80	114 96	688 54	\$03 50	896_59	93 60
B of C		68 87	730 46	799 33	None	
76	84	60.70	368 62	379 32	380-32	1 (0)
$\frac{1}{06}$	1 07	136 43	276 55	412 98	$-\frac{468}{5}$	55 13
B of C		86 38	475 77	562 15	None	10.00
70	70	31 71	229 60	261 31	261 31	12 60
$\frac{62}{62}$	70 65	6 95 4 96	$\frac{299}{160} \frac{95}{88}$	$\frac{306}{165} \frac{90}{84}$	394 75	87 85
91	1 22	157 - 62	1,080-65	$\frac{169}{1,238} \frac{84}{27}$	200 81	34 97
91	95	25 34	256 76	282 10	$\begin{array}{r} -1.378 & 47 \\ -316 & 52 \end{array}$	140-20 34-42
$\frac{s_1}{72}$	75	3 14	76 44	79 58	87 07	54 42 7 49
97	1 03	108 07	797 64	875 71	932 17	56 46
96	1 00	31 91	233 84	265 75	288 91	23 16
1 10	None	206 75	132 08	268 07	None None	43 59
* **	1.01.0		132 00	<u> </u>	2117110	10 00

TABLE No. 10—Continued.
Concrete Wilks Constructed by Day Labor, 1905.

Street	Side.	From.	To,	Width in ft.	Kind of Curbing Constructed with Walk
Hammersmith Hawthorne Howland. Hayter King King Lamport Lansdowne Lisgar Lisgar Macpherson Rathmally and Macpherson Manning.	WWESSINEWWIS E	Simcoe Crescent Rd. 505 ft. n. Wallace Queen Argyle Rathnally Rathnally	Chestnut	$\frac{12}{3}$ 13 13 15 15 15 15 15 15 15 15 15 15 15 15 15	Concrete Concrete Concrete
Manning.  Maple	W S XWWWEWWEXSS A	Bloor  Dale n. and w. Herrick South Drive College Queen Queen Wilton Wilton Rathnally	Barton.  440 feet  Bloor.  383½ ft. north  590 ft. north  Eastern  1,133 ft. s. East'n  Gould  Shuter  322 ft. east  Rathnally  Verrall  King	5 6 5 4 5 4 5 5 5 5 5 4 5	Concrete
O'Hara Orchard Padmerston Parkview Parliament Parliament Parliament Parliament Rathmally Reid's Lane Russell Sheridan Sheridan	EWSWEEWWEEWSEW	Marion Hnron Bloor Wellesley King King Sydenham King Macpherson Wilton Hnron Dundas	650 ft. north 110 ft. west London 175 ft. north Queen Queen 41 ft. e. Wilton 1444 ft. e. Adel'de McMaster 112 ft. south 150 ft. west College 472 ft. north	5 3 5 4 5 5 5 6 5 7 6 4.5 4.5 4.5	Concrete Concrete Concrete

TABLE No. 10—Continued.

Concrete Walks Constructed by Day Labor, 1905.

H 1					5 <u> </u>	
City's Tender per lin. ft.	Next lowest Tender per lin. ft.	Cost of Work not included in Tender.		tal Cost of Work exclusive of Interest on Money.	oral Cost of Work based on Contractors' Iowest Tender,	Difference Be-
-	Ē	<b>光</b> #	4 5	f in	# 2 2 2 2 1	tween City's
de l	ž -	(F)	57	o J Ses Ges		Cost and next
, 5 <u>, .</u>	F 5	de er.	≥ ge e	e e e e e e e e e e e e e e e e e e e	os Charles	Lowest Con-
z -	-3 5	E Sp	and da	<ul><li>できる</li></ul>	O TEST	tractor.
ty's Te	sxt nd	ost of Work included in Tender.	Cost of Work included in Tender.	tal Cost of Work exclusion of Interest on Money.	oral Cost of Work based on Contractors' Iowest Tender,	
3	Next lowest Tender per l	3	<u>ဒီ</u>	Total Cost of Work excli of Interest Money.	Total Cost of Work based Contractors lowest Tend	Gain. Loss
	8 c.	8 c.	3			
\$ c. 78	S c. 79	8 c. 83 79	\$ e. 112 64	8 c. 196-43	\$ c. 203_08	8, e.
98	1 00	173 72	617 42	791 14	860 29	6 65 69 15
65	69	2 16	147 73	149 89	170 24	20 85
97	98	63 63	307 34	370 97	397 91	26 94
18	None	16 93	515 - 89	532 82	None	37 88
1 05	1 10	18 13	751 - 72	769.85	809 25	39 40
50	52		214 - 50	214 50	235 - 04	20 54
63	None	14 99	65 - 97	80 96	None	94
97	1 00	$29 \ 13$	816 34	845 47	1,017 13	171 66
97	1 00	69 54	417 88	487 - 42	552 - 54	65 12
63	70	4 88	197 09	201 - 97	232 87	30 90
68	75	49-72	204 96	254 68	306 02	51 34
97	$1.02\frac{1}{2}$	35 91	1,405 97	1,441 88	1,601 09.	159 21
97	$93\frac{1}{2}$	123 33	845 94	969 - 27	1,192 03	222 76
1 10	1 13	30 78	413 62	444 40	512 95	68 55
66	70	59 46	354 17	413 63	673 22	259 59
52	5.5	16 41	217 98	234 39	238 61	4 22
65	75	8 23	373 29	381 52	451 48	69 96
79	80	70 28	459 - 22	529-50	$531 \ 72$	2 22
B. of C.		234 - 05	1,738.76	1,972 81	None	
65	67	89 63	367 32	456 95	505_03	48 08
97	1 00	91 52	341 96	433 48	491 52	58 04
1 00	$\frac{1}{1} \frac{03}{03}$	$   \begin{array}{c c}     96 & 26 \\     187 & 80   \end{array} $	319 92 $425 24$	416 18	427 61	11 43
1 00	98	64 75	$\frac{425}{352} \frac{24}{74}$	$\begin{array}{c} 613 \ 04 \\ 417 \ 49 \end{array}$	838 76	225 72
					490 46	72 97
61	62	52/97	481 30	534 27	549 47	15/20
1 07	1 08	64 14	570 98	635-12	806 32	171/20
B. of C.		72	53 48	54 20	None	
1 07	1 12 61	27 89	498 39	526 28	587 55	61/27
56   1 05	1 07	$\frac{15}{150} \frac{88}{91}$	86 93 893 92	102 81	129 71	26 90
1 05	$\frac{1}{1} \frac{07}{07}$	170 87	893 92 779 38	$\begin{array}{c} 1.044 - 83 \\ -950 - 25 \end{array}$	1,249 80	204 97
1 01	1 34	44 92	847 16	950-25 892-08	$\begin{array}{c} 1.249 \ 75 \\ 1.249 \ 75 \end{array}$	299 50
82	83	5 33	188 00	193 33	1,249 75 235 24	305 24 41 91
65	68	19 99	184 38	204 37	246 70	42 33
1.03	1.05 +	1 85	112 95	114 80	120 29	5 49
81	85	3 54	131 81	135 35	149 15	13 80
54	543	35 68	404 45	440 13	450 43	10 30

TABLE No. 10—Continued.

Concrete Walks Constructed by Day Labor, 1905.

Street.	Side.	From	To.	Width in ft.	Kind of Curbing Constructed with Walk.
Shuter	SWNENSWE S ES SSSWSSNE	George St. Patrick Broadview Sherbourne Casimir Beverley Albert King Bay First 121 ft. w. Yonge Sorauren Yonge Brunswick Wellesley Cres't Niagara Sherbourne Ontario Huntley	200½ ft. north	6	Concrete Concrete Con'r't Concrete

TABLE No. 10—Continued.

Concrete Walks Constructed by Day Labor, 1905.

City's Tender Per lin ft. Next Lowest Tender Per lin, ft.	Cost of Work not included in Tender.	Cost of Work included in Tender.	Total Cost of Work Exclu- sive of Interest on Money.	Total Cost of Work based on Contractors lowest Tender.	Difference Between City's Cost and next Lowest Contractor.  Gain. Loss
8 c. 8 c.	8 c.	8 c.	8 c.	8 c.	
62 69	47 03	398 - 62	445 65	512 - 99	67 34
84 89	5 00,	153 32	158 32	196 44	38 12
78 61	139 71	260 77	400 48	445 31	44 83
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22 46: 36 90	$\frac{185}{443} \frac{16}{66}$	207 62 480 56	268 97	56 35 64 25
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2 00	620 14	$\frac{480}{622} \frac{56}{14}$	544-81 692-82	70 68
B of C ,	60 08	1.057 28	1.117 36	None Some	10.00
B of C	$\frac{00}{26}$ 74	411 16	437 90	None	
B of C		132 61	132 61	4.6	
52 54	41 74	408-04	449 78	451-76	1 98
B of C	1 00	129 93	130 93	None	
40 - 45	2 05	144-31,	146 - 36	150 - 10	3 74
62 - 65	9 00	408 46	417 46	471 41	53 95
68 - 70	3 11	199.98	203 09	234 32	
52 55	2 50	158.59	161 09	194 - 78	
78 84	17 - 79	52 38	70 17	74 83	
1 06 - 1 08	243 11	548 - 66	791 77	854 39	
81 82	25 25	221 82	247 07	271 91	24 84
63 65	33 73	104 24	137 97	141 95	3 98
J.	5,380 85	37,016 50	42,874 91	40,055 88	5,356 85

TABLE No. 11.
PAVEMENTS.

=						
No.	Street.	From.	То.	Class of Pavement.	Width in ft.	Length in feet.
-2		Bellew'dsAve	E. Terminus.	Macadam reconst'n. Macadam, 2nd class V.B.reconst'n Devil	30 24 3.8	1,904 473 337
56789	Edward s.s Elizabeth Com'cial Lane Fraser Ave Hawth'nAve.n.s	Teraulay Queen Francis 239 ft. s. King 650 ft. n. Dale	University College W. Terminus 461 ft. f'thers 192 ft. f'th'r n	Macadam reconst'n. Concrete curbing Macadam reconst'n. Brick on 4-in. con. Brick on 4-in. con Concrete curbing	24 24 28 24 .5	$ \begin{array}{c c} 1,837 \\ 1,180 \\ 3,373\frac{1}{2} \\ 211 \\ 192 \\ 461 \\ 461 \end{array} $
11	King	Approaches	Subway	Macadam, 2nd class V.B. Devil Strip. { Cedar block relaid {	24 3.6 to 7.3 94 to	$ \left. \begin{array}{c} 187 \\ 1,151 \\ \end{array} \right\}_{327.4} $
13 14 15	Leuty Ave Molson Ave Phipps	Queen Roxborough . 12½ ft. w. St. Nicholas	644 ft. south. Macpherson St. Vincent	Grading	$ \begin{array}{c} 11\frac{3}{4} \\ 24 \\ 15 \end{array} $	644 3133 4154
17	Расть Ave	Yonge	Intersection.	Brick on 6-in. con Wood block Brick & Scoria Devil Strip	3.5	$893$ Brick $4,815\frac{3}{4}$ Scoria $596\frac{1}{4}$
20 21 22	Teranlay	Broadview . Albert Sorauren	380 ft. east College E. Terminus.	Macadam, 2nd class Macadam, 2nd class Macadam reconst'n Tar Macadam Macadam reconst'n.	14 to 24 22 30 19 35	$ \begin{array}{c} 3.04 \\ 1,145\frac{1}{2} \\ 380 \\ 2,875\frac{1}{2} \\ 314 \\ 936\frac{3}{4} \end{array} $
24 25	Yonge $Y$ onge	College Severn	Bloor,	Macadam reconst n. Scoria Devil Strip reconstruction Retaining wall Wood Block	3,5	2,875
	l	į				i .

TABLE No. 11.
Pavements.

City's Tender.	Next Lowest Tender.		Actual Cost of Work included in Tender.	Total Cost of Work Exclusive of Interest on Money.	Lotal Cost Ost Based of Contracting Tender and next Lowest Tender.  Countracting Tender and next Lowest Tender.  Gain. Loss.				
		Cost of worlineladed Tender.			10t	Gain.	Loss.		
\$ c. 3,911 00	\$ c. 4,496 00	\$ c. 1,754 00	\$ c. 3,830 82	\$ c. 5,585 04		\$ e. 665-18	\$ е,		
1,626 60	1,789 00		$\begin{array}{c} 1,710 & 89 \\ 195 & 65 \end{array}$		1,893 28	78 11			
3,063-00	3 315 00	1.048 47	2.892 10		4,363 47	422 90			
413 00	424 80		400 35		565 13				
8,040 00	8.829 00		7,233 38		9 358 82	1,595 62			
1,396 00	1,550 00	97 87	1,638 80		1,647 87		88 80		
2,970 00	3,069 00		2.853 23		3,135 96				
152 13	None	14 12	74 38	88 50	None				
710 00	779 00		685 78	783 - 67	876 89				
			954-39	954 39					
		66-46	1,103 00	1,169 46					
		4 05	338 51	342 56					
975 00	1,040 00		1,119 59	1,470 51	1,390,92		79.59		
1,689 00	1,785 00		1,896-66	1,980 05					
5 950 00		252 - 72	5,564 17	5,816 89	None	385 83			
			1,045 33						
• • • • • • • • • • • • • • • • • • • •			3,839-32	3,839 32	• • • • • • • • • • • • • • • • • • • •				
3,832 00	; 3,887 00	366-75	3,532 98	3,899 73	4,253 75	354 02			
1.555.00	1 020 00	101 05	1 551 10	1.062.05	0.041.05	50 On			
-1,555 00 $-5,639 00$	-1,850 00 5,939 00	$\begin{array}{c} 191 & 97 \\ 482 & 59 \end{array}$	-1,771 - 10 -5,534 - 03		$\begin{array}{c} -2,041 & 97 \\ -6.421 & 59 \end{array}$	78 90 404 97			
	- 5,959 00 $-$ 1,230 00		1,267 94	,					
$\begin{array}{c} 1,217 & 00 \\ 2,754 & 00 \end{array}$	$\frac{1,250,00}{2,950,00}$		-1,267 - 94 -2,819 - 90	$\begin{bmatrix} 1,391 & 38 \\ 2,992 & 09 \end{bmatrix}$	$\begin{array}{c} 1,353 & 44 \\ 3,122 & 19 \end{array}$		37 91		
£, 10± 00	2,000 00	172 19	$\frac{2,818}{3,288}$ 96			150 10			
· · · · · · · · · · · · · · · j			0,500 10	9,200 90					
			900 04	900 04					
	• • • • • • • • • • • • • • • • • • • •		2,324 51						
			2,027 01	2,024 01					
45,883 13	42,932 80	5,948 44	58,815 81	64,764 25	48,543 89	4,449 07 317 99	317 99		
}					Net gain	4.131 08			

 ${\it TABLE~No.~12.}$  Works Constructed as Local Improvements from 1892 to 1905 (inclusive).

Class of Work,	1892	1893.	158	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902	1903.	1904.	1905.	Total.
Asphalt pavements Bitulithic														30 9	241 13
Brick	٠.,			2	-6	16	13	23	13	7	11	10	12	9	122 18
Cobble stone pavements	õ								1						6
Stone sett								'	- 1	1	- 6	14 12	14 8	$\frac{12}{9}$	$\frac{145}{37}$
Cedar block pavements. Concrete	20	14	6	3	3	7	19 1	20	. 24		1	2	1	6 2	$\begin{array}{c} 157 \\ 10 \end{array}$
Seoria block		٠	١.		. 1					1	- 3	4	6	15	1 29
Wood curb	- 6	- 3	- 6	11	-6	13,	25	-37	85	118	188	236	247	276	$\frac{5}{1,257}$
Brick sidewalks Stone flag	1	1	٠.			٠.									33 2 4
Wood block														2 2	2 3
Vitrified block		-	-									· · ·			

					-
Street.	1	const'd. Average Depth.	Soil.	Inspector or Foreman.	Contractor.
Don Esplanade	Fairmor Lansdov	ft. in 5 7 0 88 10 10 2 10 3	clay	R. Patterson	Godson Con. Co.
Morley Ave Princess Dundonald	Front .	16 9	3 clay 9 '' 0 sand	Wm. Hill	John Maguire.
Hallam Lane off Claremont Virgin's & Turner's Lane	Claremo	6 10	o clay o run'i'g sa'd and clay	R. Patterson	City.
Aberdeen Ave Spurkhall Ave Royce	Broadvi	20 12	6 sand	Wm. Hill R. Patterson d Wm. Hill	. City.
Jarvis St. Extension Grace	to end o 470 ft. r	$\begin{vmatrix} 2 \\ 40 \end{vmatrix}$ 14	2 clay	W. F. Donaldso Wm. Hill R. Patterson	n Medlar & Arnot. Jno. Maguire City.
Pacific Van Horne Chestnut Park Rd.	Atlanic Doverce	$\begin{array}{c c} 12 & 12 & 1\\ \hline \epsilon 0 & 10 & \end{array}$	[0] gravel 6 clay	Wm. Hill R. Patterson	J. H. McKnight. City.
Bernard Ave Ernest	St. Geo:	20 19	O hard nan	F. J. Carrette Wm. Hill, R. Hu chesonand F	. Jno. Maguire. t-J. H. McKnight.
Melville Ave Queen		26 8	3 clay	Carrette F. J. Carrette R. Patterson	. Jno. Maguire. City.
Howard Park Exhibition	Ronces	$\begin{array}{c} 4\overline{0} \ 11 \\ \dots \ 10 \end{array}$	$ \begin{array}{cccc} 7 & \text{sand} & \dots \\ 0 & \text{clay} & \dots \end{array} $	R. Hutcheson . R. Patterson	J. H. McKnight City.
Exhibition		d 10	2		
Lane 1st e. Yonge . Dickens	Shuter. Carlaw College	$\begin{array}{c c} & 7 \\ 36 & 10 \\ 6 & 10 \end{array}$	$\begin{array}{c} 2 \text{ quick sand} \\ 6 \text{ sand} \\ 2 \end{array}$	nd R. Patterson	
Avenue Rd	]		1	ay F. J. Carrette .	
Millicent	Dovero Cotting	$egin{array}{cccc} 0 & 48 & 11 \ 2 & 11 & 11 \ \end{array}$	7 5 s'nd & gr'	'v'l Wm. Wells	E. Axworthy.
Pearl					J. F. Connolly.
Farnham Ave	Avenue Extens Dundas Avenue Presen Avenue Kew Be	40 11 16 11 8 6 12 40 15 t 60 11 40 12 et 10	2 clay & sa 7 clay 10 sand 10 s'nd & gr 6 clay 3 gr'v'l & s 3 clay & s	Wm. Wells R. Hutcheson C. North R. Patterson Mm. Wells	E. Axworthy. City. E. Axworthy. Godson Con. C J. H. McKnigl City. E. Axworthy.
Salisbury Chestnut Oriole Rd. St. Clair Stirling Rd.	. 193 ft. Queen St. Cla Avenue	w 6 11	3 sand sand	R. Patterson	Jno. Maguire. J. F. Connolly

TABLE No. 1.

Showing Sewers Constructed During the Year 1905.

Street.	From.	To.	Nize.	Descrip- tion.	Length.	No. Manholes.	No. Gullies.	No. P. D. const'd.	Average Depth.	Soil.	Inspector or Foreman.	Contractor,
		125 ft. further north		Tile pipe	236ft. 6in.	2	2	õ	ft, in.	clay	Wm. Douglas	City.
Dufferin	Fairmont	Bloor	15 ''	"	1216	4	8	88			Wm. Hill	
Paton Rd	Lansdowne	A pt. 529 ft. west	19 "		570 771ft. 6in.	3	6	2 44			R. Patterson	City.
Morley Ave	Gueeu	Ashbridge's Bay King	12 "	"	290	2	2	16		clay	"	**
Dundouald	Yonge	150 ft. w. Church	12	**	821ft. 6in.	3	4	60	13 (	sand	Wm. Hill	John Maguire.
Hallam	Ossington	Shaw	12 "	**	665	3	3	44		elay	A. McCormack	
Lane off Claremont	Claremont	127 ft. west	12 "		160	2			10 5	2 "	R. Patterson	City.
	King	South end	12 "		305	1	2	10	10 (	and clay.	"	•••
Lane	Parliament	222 ft. e. Ontario	19 "	**	471	1	2	32	11 (		Wm. Hill	Jno. Magnire
Sparkhall Ave	Broadview	380 ft. east	12		428ft. 8in.	2		20			R. Patterson	
Royce	Symington	G. T.R	12 "	**	700	2	4	42	11 :	Belay & sand	Wm. Hill	Jno. Magnire.
Jarvis St. Extension	to end of Slip		48 "	St'elpipe	297ft. 6in.							1 Medlar & Arnot.
Grace	470 ft. n. College	500 ft. further north	18 "	Tile pipe	500	2	4	40	14	elay	Wm. Hill	. Jno. Maguire.
Cottingham	Avenue Ka	A pt. 633 ft. east Pacific	19 "		674 243	2	2		12 1	Daraval	R. Pattersou	. J. H. McKnight.
Van Horne	Dovercourt	Ossington	15 "		952	4	5				Wm. Hill	
Chestnut Park Rd.	extension		12 "	**	196	3			11	2 "	R. Patterson	. City.
Bernard Ave	St. George	Huron	12 "		407	2	2		12	O hard pan.	F. J. Carrette	. Jno. Maguire.
Ernest	Perth	West end	12 "	**	498	3	2	28	10 1	Oʻquick sano		- J. H. McKnight.
			1							1	cheson and F. J Carrette	
Molville Ave	Show	651 ft. 8 ins. east	19 "		651	2	4	59	7	3 clay	F. J. Carrette .	Ino Magnire
Queeu	A pt. 150 ft. west of	200 ft. east	12 "		367	4		26	8	0	R. Patterson	. City.
	centre line of				ļ							
** 15 1	Morley			4.5	210	١.	١.			_ ,	D II . 1	T TT 57 TT 1 1 1
Howard Park	Roncesvalles	Sunnyside Lake	9 "		613 346	4	4					. J. H. McKnight.
EXIMINITION	Building (w.s.)	Lake	."		.590				10	oeiay	R. Patterson	. City.
Exhibition	Centre of e.s. M'f'g	Lake	9 "	**	566				10	2	"	
	Building								_			
Lane 1st e. Yonge .	Shuter	South end	9		164 680		1		7	8 "	. F. J. Carrette	. Con. & Pav. Co. . J. H. McKnight.
Gludstone	Carlaw	Logan	19 0	1	183	3	4				R. Patterson	
Gladetone	168 ft a College	1.40 ft further couth	19 0		140	î			12	2	" ···	
Avenue P.1	461 ft n Cattingham	St. Clair	2ft,x	Buiole	2018	7	12		1	1	y F. J. Carrette	1
Avenue Ma	401 Te. II. Cottingilani	[31. Clair	3ft.	Drick		1 '		1			*	
Millicent	Dufferin	West end	10 11	Tile pipe	1293	3	8		9 1	l clay	. R. Patterson	City.
		Havelock		- 66	759 400	3	4 2		11	5 a'nd & co'v	R. Hutcheson .	E Ayworthy
Poplar Plains	350 ft. n. Cottingham	100 ft, further north	15 "		82	ī	1			1		. I i i i i i i i i i i i i i i i i i i
Pearl	Simcoe	1.3	12 &		825	4	6				. R. Hutcheson	
			15 in		1				1	1 -	1	
		East City limits 590 ft. west			672 620	3 2	4				'l C. North	
Chestnut Park Rd.	Extension	590 It. West	12 0		450	3			)  11   11	7 clay & san	d Wm. Wells R. Patterson	City.
		205 ft. north			241ft, 6in.					0 sand		
Olive Ave	Avenue Rd	600 ft. east	12 '		640	3	2				'l Wm. Wells	E. Axworthy.
Palmoral Co.	Present terminus	Barton Ave.	15 '		742	2	2		11			Codson Con. Co.
Oneen	Kow Bouch Fire U.1	Poplar Plains l Kippendavie	12;	: ::	618 288	2	. 2		12			J. H. McKnight
Mark	Don	River St	12		In progress				10	clay & san	d R. Patterson m Wm. Wells	E Ayworthy
Salisbury	193 ft. w. Sackville	. 90 ft. further west			90	i					R. Patterson	
Chestnut	Queen	Armouries	. 12 '		In progress					. clay	**	**
Oriole Rd	St. Clair	Lonsdale	18							sand	. F. J. Carrette .	Jno. Maguire.
Stirling Rd.	Avenue Rd	Oriole Rd	. 18		1469	9	4		16		R. Hutcheson .	. J. F. Connolly.
			10		1400	"	4	1 "	710	of unigst	d G. Parsons	city.

# SEWERS, DRAINS AND SPECIAL WORKS.

CITY ENGINEER'S DEPARTMENT,
Toronto, December 31st, 1905.

Mr. C. H. Rust,

City Engineer.

Dear Sir.—Herewith I submit the Annual Report, showing in detail the work done under the supervision of this branch of the Department.

The following table shows the length in feet of sewers constructed during the year:

9-inch tile pipe	1,364	lin. ft.
12-inch tile pipe	13,288	**
15-inch tile pipe in concrete	7,852	* 6
15-inch tile pipe in concrete	500	
2 ft, x 3 ft, brick	2,018	
4-ft. steel pipe	298	••
Total		

There are 245.11 miles of sewers in the City.

There are 11 automatic flush tanks in the City.

During the year there were:

121 new manholes built.

106 manholes repaired.

641 new gullies built.

90 gullies repaired.

63 miles of sewers flushed and cleaned,

#### GENERAL SEWER REPAIRS.

The old box drain on Eastern Avenue, from the Don River to Cypress Street, was found to have collapsed. This was taken up and replaced by an 18-in, pipe in concrete. The old brick sewer on King Street, between Spadina Avenue and Portland Street, was opened in several places, repaired and thoroughly cleaned. The repairing of the invert of the Rosedale Creek sewer was continued during the winter months; the weather being colder and drier than usual, we were able to

keep the men almost continually engaged, and the repairing of this sewer, which has been carried on during several winters, was completed. The 48-in, steel pipe ontlet of the Jarvis Street sewer was extended 298 feet to the end of the slip, and the slip filled in.

The following table shows the lineal feet of private drains constructed during the year:

	6-in.	9-in.	12-in.	18-in.
January	761	72		
February	942	99		
March	4.190	171		
April	3,863	353		
May	5.795	124		
June	4,526	390		40
July	3,988	416		
August	5.964	385		
September	5,232	151		
October	5,480	291	33	
November	5,162	322		
December	2,505	198	70	
_				
5	48,408	3.032	103	40

In addition to the above, 88 private drains were repaired and 29 flushed.

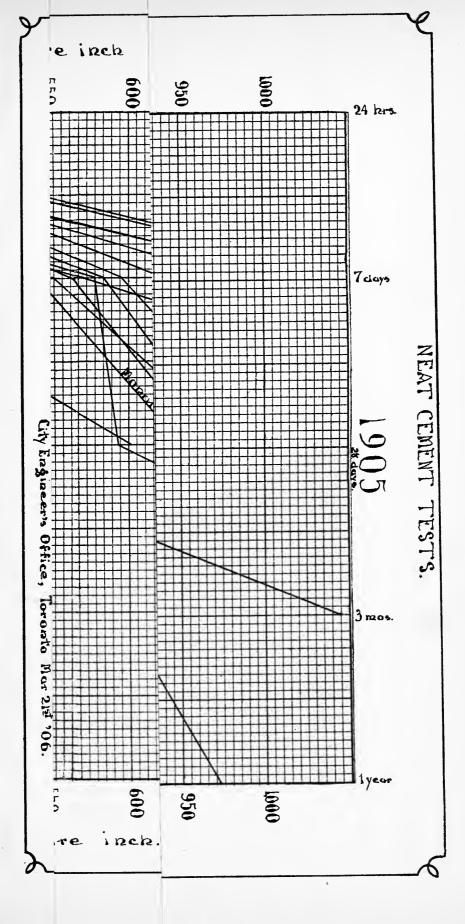
The total length of private drains laid during the year was 51,583 lineal feet, and for 1904, 37,627 lineal feet, which shows a great increase in the number of homes and business houses during the present year.

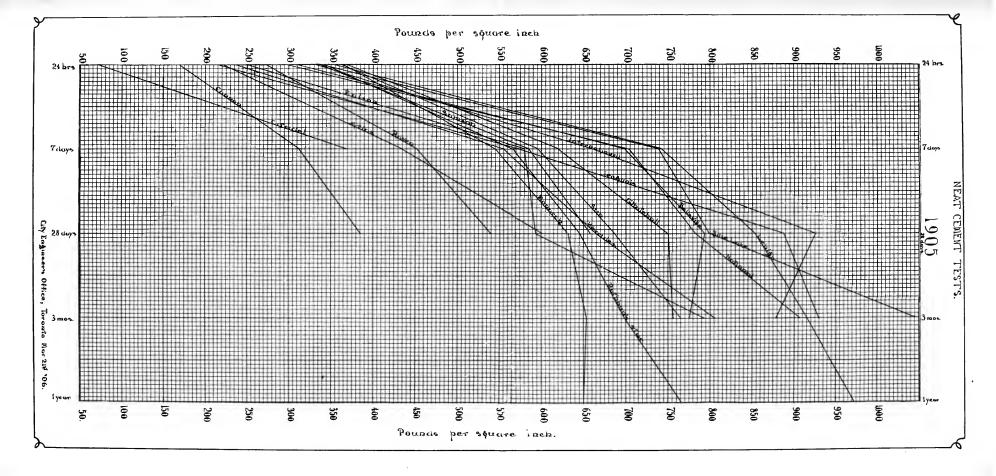
#### DREDGING SEWAGE DEPOSITS OUT OF SLIPS.

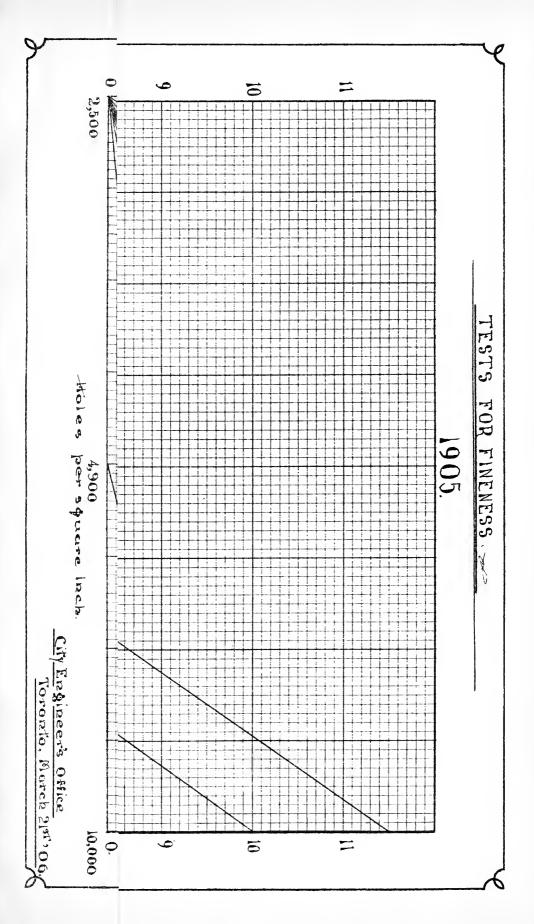
Sewage deposits were dredged from the following slips during the year:

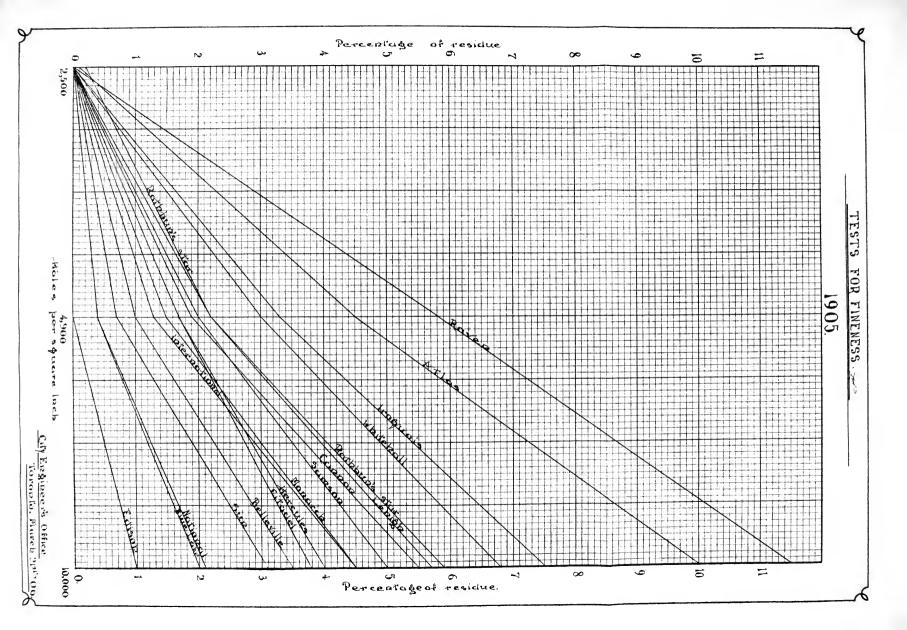
Yonge Street sewer outlet. Church Street slip. Sherbourne Street slip. Berkeley Street slip. Queen's Wharf channel.

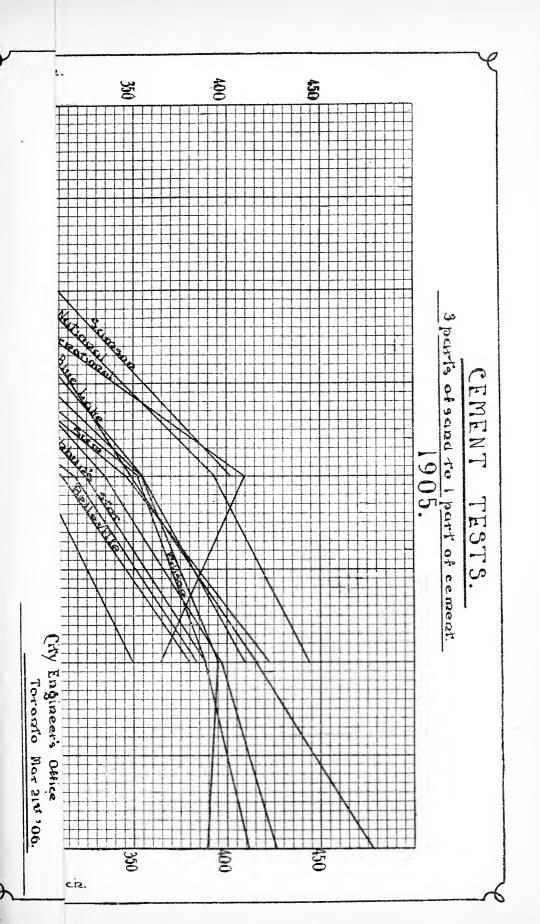
The total quantity of material removed being 16,273 cubic yards.

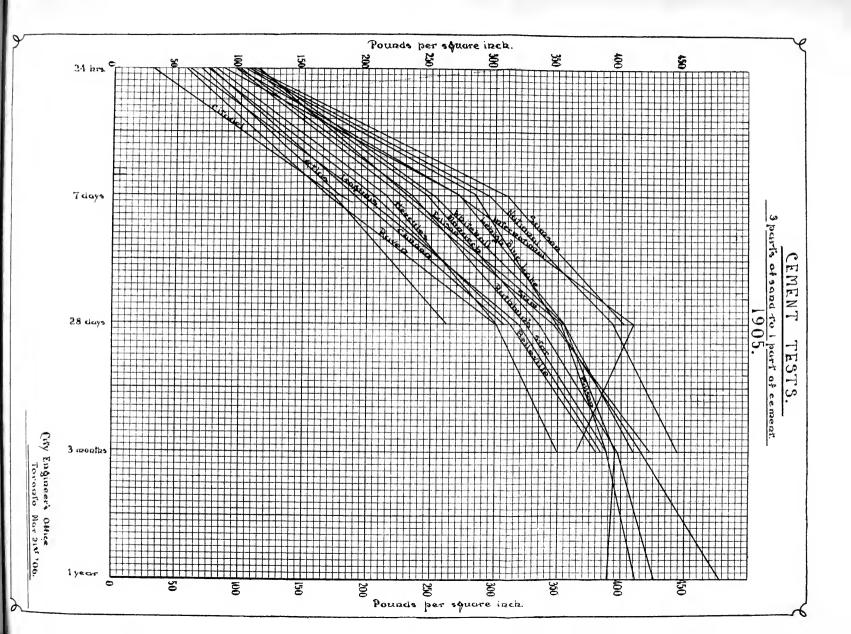






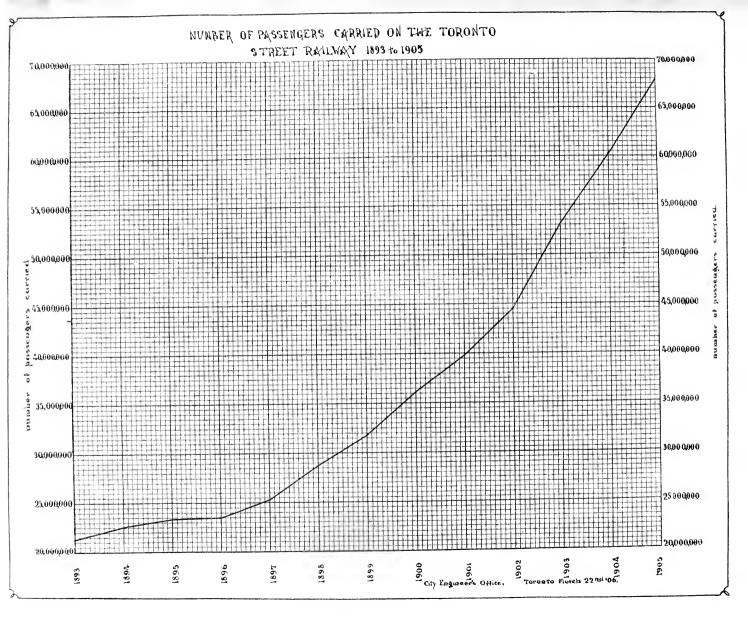


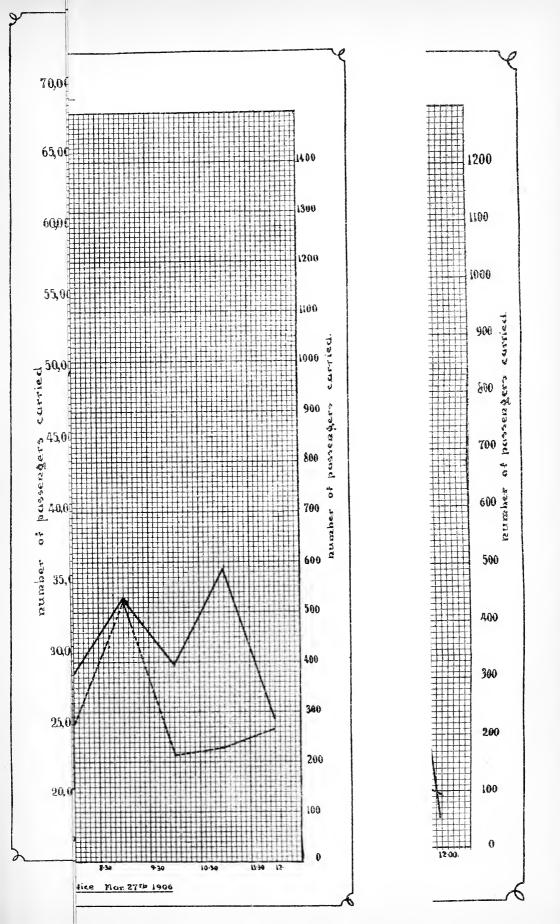


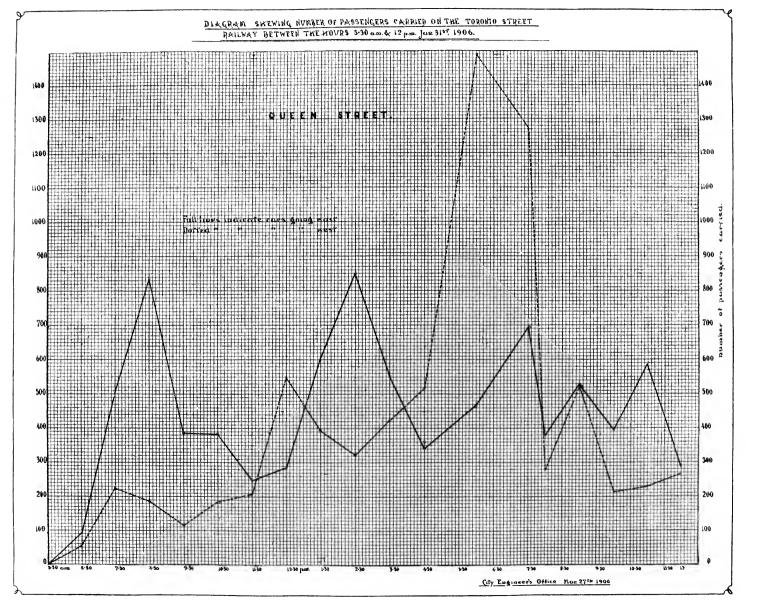


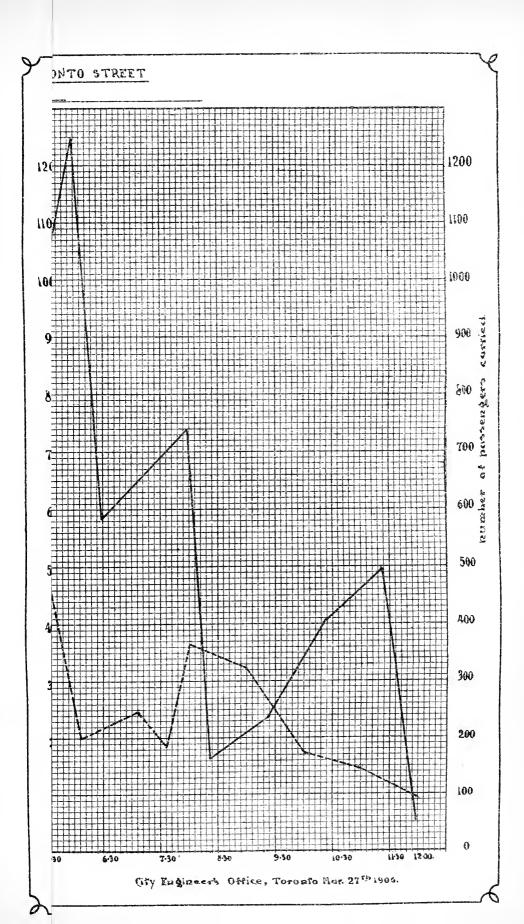
RECORD OF CEMENT TESTS, July 1st, 1904, to July 1st, 1905.

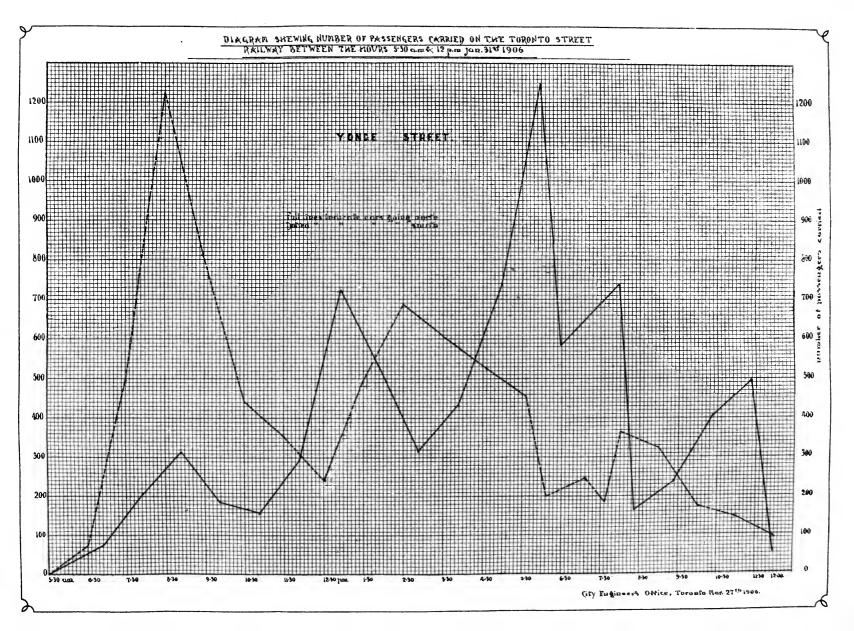
		Remarks.	United States. 478 Canadian. 478 Canadian United States Condain Conited States. 389 Childed States. 426 Canadian Childed States Childed States Childed States Childed States Childed States Childed States.
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e inc	3 (sand) to 1 (cement)	3 months.	88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
sdnar	to 1	28 days.	3 4 6 3 5 6 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
per s	and)	7 days.	F 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
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itren	Neat.	28 days.	25 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
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		Final.	9 6 6 8 8 6 6 6 8 8 6 6 6 8 8 6 6 6 6 8 8 6
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x	<sup>%</sup> 2	X <sub>0</sub> , 100 Sieve.	5 x 3 x x x + 4 4 x x x 4 3 x x 1 x 2 x 3 5 x 5 x x x 5 x x x x x x x x x x x x x
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	travity.	) officeq2	8, 8, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9,
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#### GULLY CLEANING.

On the first of August the work of cleaning the gullies was handed over to this Department, and was carried on systematically until the winter set in. The gullies on all the streets were cleaned at least once; those on streets with asphalt and brick pavements, twice; while those on King, Queen, Yonge and other down-town streets were cleaned several times.

#### STREET RAILWAY MATTERS.

During the year a daily record of the service, furnished by the Toronto Railway Company, was taken and a weekly report made to the Board of Control and the City Solicitor.

During the year the Company have put in service a number of 10-foot, double-truck, convertible cars and, I understand, they have more in course of construction.

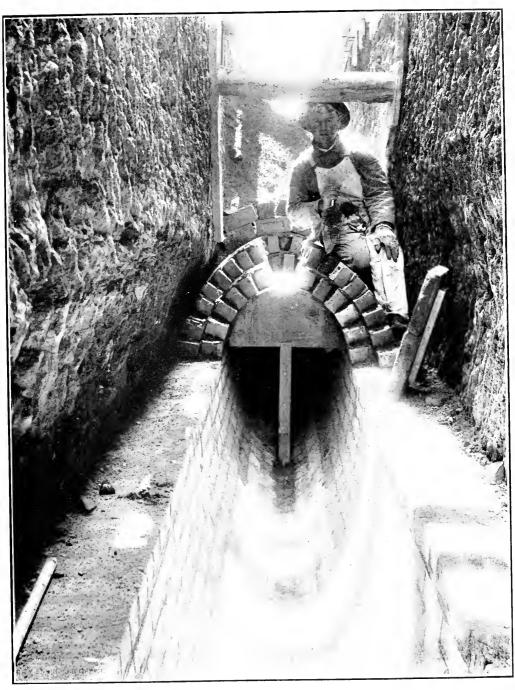
They have also equipped most of their cars with air brakes, necessitating the erection of compressed air plants at the several car barns for charging these brakes.

## BELL TELEPHONE COMPANY'S CONDUITS.

Underground conduits were laid by the Bell Telephone Company on the following sections of streets:

Street.	From.	To.	Lineal Feet.	No. of Ducts.	Total No. of Feet.
Peter	Adelaide	Oneen	Ft. In.	9	6,462
			123	1	123
Victoria	Queen	Wilton	1,239	6	7,432
			386	2	772
Solio	Queen	Plicebe		11	-1,078
			176	9	1,584
			262	8	2,096
Phæbe	Salsa	u	31	$\frac{2}{8}$	62
Huron				8	$\frac{2,008}{2,232}$
1101011	r neoc	Sumvan	100	12	$\frac{2,232}{1,200}$
			70	2	1,200
			$\frac{10}{20}$	3	60
			67	2	134
Ontario	Duchess	Wilton .	1,840	$\tilde{9}$	16,560
			429	2	858
			65	4	260
Queen	Simeoe	William	274	6	1,644
William	Queen	Anderson	1,500	6	9,000
Duchess	George	Ontario	1,339	12	16,068
			87	2	174
			25	4	100
Ontario	Duchess	Wilton	1,840	9	16,560
			50	4	200
	1		425	2	850
Avenue Rd	Bloor	Bernard	1,181 6	8	9,452
			780	6	4,680
Brock	()	Q 11	532	$\begin{bmatrix} 2 \\ 8 \end{bmatrix}$	1,064
Drock	Yueen	Conege	$\frac{2,861}{788} \frac{9}{6}$	6	$\frac{22,894}{4,731}$
Lamport	Characht Dd	380 ft mouth	380	1	$\frac{4,731}{380}$
	Brock		4,333 6	6	26,001
	Introd		$\frac{4,363}{1,143}$	. 2	2,286
Walmer Rd	Bloor	151 ft. north	151	2	302
Washington	Washington	Lane	145	2	290
$\mathbf{Y}$ ork	York	Lane west	163 6	2	327
Bay Street branch			142	4	568
-	1		20	2	40
			24,315 9	į	160,674

This work was commenced on the 26th April, and completed on November 8th.



AVENVE ROAD SEWER-INVERT AND CROWN



#### TORONTO ELECTRIC LIGHT CO.'S CONDUITS.

Underground conduits were laid by the Toronto Electric Light Company on the following sections of streets:

Street.	From.	To.	Lineal Feet.		Total No. of Feet .
Wellington Shaw	Defoe	Queen Gladstone	$\begin{array}{c c} 720 \\ 2,976 & 6 \\ 304 & 6 \\ 690 \end{array}$	24 12 12 12 12 18 12	31,656 8,640 35,718 3,654 12,420 7,812

This work was commenced on the 12th of April, and completed on the 1st of November.

#### DAY LABOR WORK.

Table No. 2 gives a list of twenty-two sewers constructed by day labor. In nine of these the City Engineer's tender was lower than the next lowest contractor's tender. A profit is shown on all, except in the case of the sewer on Sterling Road, where quicksand was encountered and the work had to be carried out during an unusually severe winter with the frost several feet down in the ground. If we deduct our loss on this work from the gain on the other eight, we show a saving to the City of \$1.442.51, added to which should be the extra cost of inspection entailed had these sewers been constructed by contract.

This table also shows the length, size, the amount of the City's tender, the next lowest contractor's tender, the actual cost of the work, etc.

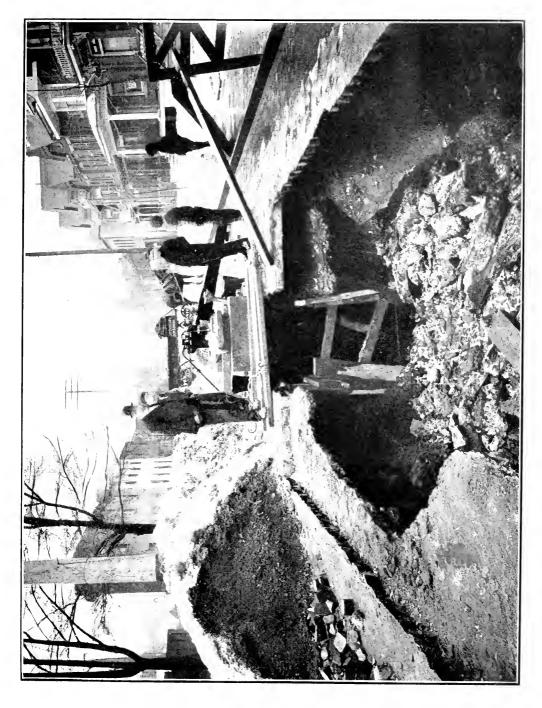
Table No. 1 gives a list of all the streets upon which sewers were constructed during the year.

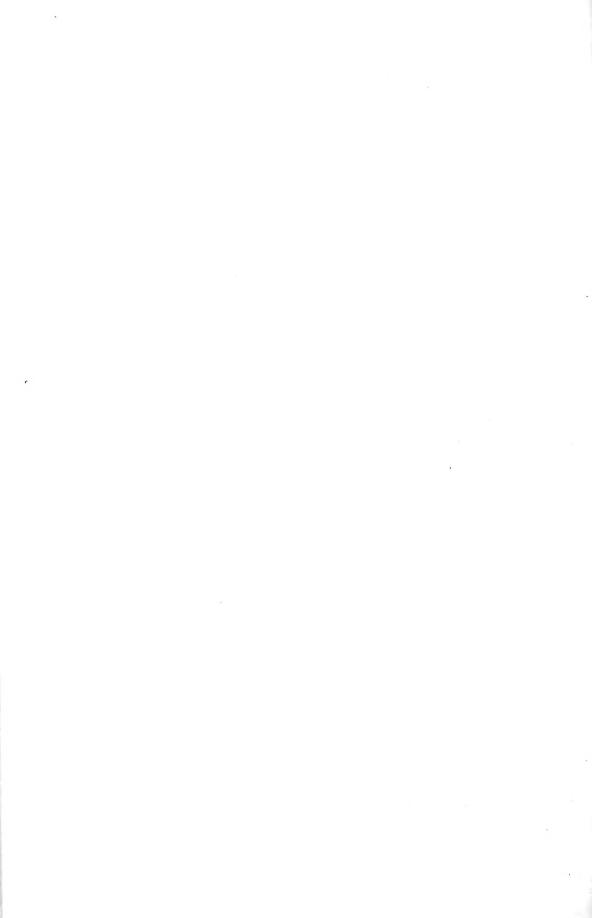
Respectfully submitted,

J. D. SHIELDS,
Assistant Engineer.

TABLE No. 2. HOWING THE COST OF SEWERS CONSTRUCTED BY DAY LABOR DURING THE YEAR 1905.

Don Esplanade   315 ft. n. of East. 125 ft. further n. 12 in Tile Pipe 236   Ft. in Don Esplanade   229 ft. west   12   250 ft. in Don Esplanade   229 ft. west   12   250 ft. in Doness   230 ft. west   12   250 ft. in Doness   230 ft. west   12   250 ft. in Doness   230 ft. west   250 ft.		Sz e obduos	ոչքի.	ys Tender	zewo. Tobue!	of interest money.	Difference betwee actual cost and lowest centract Tender.	Difference between actual cost and lowest centractor's Tender.
made  Ve Claremont Turn'rs L.  m n n n n n n n n n n n n n n n n n n		$\mathrm{D}^{\mathrm{e}}$	эΊ	Gir	$^{9}Z$	17.6 17.6 10.0	oss.	Gain.
Claremont Turn'rs L.  n Park Road n A Read A A A A A A A A A A A A A A A A A A A	st- 125 ft. further n 12	n Tile Pipe	ft. in. 236 6	İ	497 00 No t'n'er \$	404 84	0 G	ં
ve Queen Ashbridge's I Queen Claremont South end Strent Claremont Avenue Rd 633 ft. east.  Park Road Extension Contre 200 ft. e of ce line of Morley Ave line of Morley Ave line of Morley Clarke Man'fact'rg Bldg.  Man'fact'rg Bldg.  Man'fact'rg Bldg.  College College 130 ft. north 168 ft. s of College 140 ft. furthe Dufferin West end Extension College 140 ft. further 193ft. w. of Skville 90 ft. further Queen Armouries decreased 150 ft. north 193ft. w. of Skville 90 ft. further Queen Extension Clarke Armouries						. 000	_	
Ve Gueen Ashbrudge's I Front King King Claremont Claremont 127 ft east 127 ft east Turn'rs L. King South end Extension 150 ft. wo fcentre 200 ft. e of ce line of Morley Ave line of Morley Clentre of w. s. of Lake Man'fact'r'g Bldg. Centre of e. s. of Lake Man'fact'r'g Bldg. College College South 168 ft. so f College L40 ft. furthe Dufferin Dundas Strension Dundas 205 ft. north 193ft. w. of S'kville 90 ft. further Gueen Dundas Extension Dundas Armouries.	;	, ,	•	No tender.	4	1,024 28	:	:
Claremont Claremont Kning Claremont Claremont Claremont Claremont Claremont South end Turn'rs L. King Mane Rd 633 ft. east Markension 633 ft. east 150 ft. w. of centre 200 ft. e of ce 150 ft. w. of centre 200 ft. e of ce 150 ft. w. of centre 200 ft. e of ce 150 ft. w. of centre 200 ft. e of ce 150 ft. w. of centre 200 ft. e of ce 150 ft. w. of centre 200 ft. e of ce 150 ft. w. of College 140 ft. furthe 168 ft. s of College 140 ft. furthe 168 ft. s of College 140 ft. furthe 193 ft. w. of Skville 90 ft. further	Ashbridge's Bay 12	, ,	9 122	1,356 90	;		:	:
Turn'rs L. King  Turn'rs L. King  Broad view  Broad was  Broad Bxtension  150 ft. w. of centre 200 ft. east.  150 ft. w. of centre 200 ft. e of of inc of Morley Ave line of Morley Ave line of Morley Ave line of Morley Ave line of Morley Centre of e. s. of Lake  Man'fact'r'g Bldg.  College  College  Man'fact'r'g Bldg.  College  Long Lake  Man'fact'r'g Bldg.  College  Long Lake  Man'fact'r'g Bldg.  Long Lake  Man'fact'r'g Bldg.  College  Long Lake  Man'fact'r'g Bldg.  Long Lake  Mest end  West end	Nung		.: (657	00 9tc		10 720	:	99 99
Turn'rs L. King South end Bradview 380 ft. east.  Park Road Extension 150 ft. w. of centre 200 ft. e of ce line of Morley Ave line of Morley Ave line of Morley Ave line of Morley Ave line of Morley Centre of w. s. of Lake Man'fact'rg Bldg.  Man'fact'rg Bldg. 150 ft. north 168 ft. s of College 140 ft. furthe Dufferin West end Extension 205 ft. north 193 ft. w. of Skyille 90 ft. further Queen 193 ft. b. H. h. Krimouries	IZI It east IZ			@ 00 gg.		1 3	:	82 08
Mond view 380 ft. east.  Park Road Extension 633 ft. east.  150 ft. w. of centre 200 ft. e of ce line of Morley Ave line of Morley Gentre of w. s. of Lake  Man'fact'rg Bldg.  College.  Man'fact'rg Bldg.  College.  Man'fact'rg Bldg.  College.  Man'fact'rg Bldg.  Man'fact'rg Bldg.  Dufferin 168 ft. s of College 140 ft. furthe lift for the lift f	South end 12		305	. 530 00		444 139	:	98 81
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Centre of e. s. of Lake   Man'fact'r'g Bldg   College   L50 ft. north   L68 ft. s of College   L40 ft. further   Dufferin   West end   West end   Dufferin   Dufferin   L93ft.w.of S'kville 90 ft. further   L93ft.w.of S'kville 90 ft. further   Cueen   Cueen   Armouries   d   K   K   E   E   E   E   E   E   E   E								
Mair racting Bidg.   College   College   L50 ft. north   L68 ft. s of College   L40 ft. further   Dufferin   West end   Park Road Extension   205 ft. north   L93ft. w. of S. kville 90 ft. further   Couen	Lake	;	566	3	;	546 70	:	
College 150 ft. north 168 ft. s of College 140 ft. furthe Dufferin West end Park Road Extension 205 ft. north Umdas 193ft.w. of S'kville 90 ft. further Queen Ramouries								
168 ft. s of College 140 ft. furthe   Dufferin   West end     Park Road Extension   205 ft. north     Dundas   193ft. w. of S'kville 90 ft. further     Queen   R. C. D. M. E. D. M. Krilles     K. C. D. M. Krilles	150 ft. north		183	580 00	289 00	8.	-	103 89
Park Road Extension West end  No Dundas 205 ft. north 193ft. w.of S'kville 90 ft. further cheen  Armouries		",	140	253 00	273 00	192 69	-:	80 31
Ave Dundas 205 ft. north  193ft. w.of S. kville 90 ft. further  (Queen Armouries d		33 13	1,293	2,495 00	2,495 00 2,643 60	2,054 63		588 37
Ave Dundas 205 ft. north 193ft.w.of S'kville 90 ft. further  (Queen Armourles		"	450 N	No tender.	No t'n'er	650	-	
d   193ft. w. of Skville 90 fr. further   Queen   Armouries   d		,,	241 6	; ;	*,	292 63		
d Armouries		"		3	;			
Wom Bolt E Hall Kitstondarde	Armouries 12	""	1	In progress				
U. D. D. D. Hall Wishestone		",	1.469	3.883 004.781	4.781 00	4,308 63 472	2 37	
INEW D CIL F. HAII MIDBEILURATE (	all Kippendavie 9 "	",	288	288 No tender.		291 32		
						1		
						147	472 37	1,914 88





# REPAIRS AND MAINTENANCE OF BRIDGES, WHARVES, Etc.

CITY ENGINEER'S DEPARTMENT,
Toronto, December 31st, 1905.

Mr. C. H. Rust,

City Engineer.

DEAR SIR:

Herewith I submit a statement of work done during the year;

Cherry Street Bridge.—The cribwork carrying this bridge is constantly moving, which necessitates an adjustment of gearing whenever it is required to be opened. A new wearing course has been placed on the deck, and other repairs.

Eastern Avenue Bridge.—A new wearing course has been put on the deck and some repairs done to fences and railings.

BINSCARTH AVENUE BRIDGE.—Two old wearing courses were stripped off this bridge and a new one put on, the handrailing was repaired and stayed in several places.

Riverdale Park Bridge.—This bridge shows considerable decay, so that it is rendered unsafe. A wood trestle has been placed in the centre of channel and while that remains it may be considered safe. A new steel structure ought to be provided at once to take its place. The present piling abutments will carry a steel structure for some time.

Gerrard Street Bridge.—The entire deck of this bridge, including stringers, are in a very bad condition, and must be renewed this season. It is only by constant vigilance during the past year that serious accidents have been averted.

York Street Bringe.—Some repairs have been done to the sidewalks where needed.

HUMBER RIVER BRIDGE.—The deck on this bridge is wearing well, only about two-thirds was worn through and this was renewed. The traffic here is very heavy.

LAMB'S BRIDGE.—General repairs were made to the deck and hand-railing. The gear requires frequent adjustment.

SHAW STREET BRIDGE.—This bridge is in a very decayed state and should be replaced by a steel structure. Some repairs were done to bents and handrailing and a new wearing course was put on. Unless a new bridge is contemplated during the coming year some considerable repairs and renewals must be made to bents and stringers.

CRAWFORD STREET BRIDGE.—Some considerable patching has been done to the deck planks of this bridge, but unless a new bridge is contemplated during the coming year, the bents, sills and stringers must have some considerable repairs or renewals.

STRACHAN AVENUE BRIDGES.—During the past year an entirely new wearing course has been put on these bridges, but on thorough examination I find the bents and sills will require a large amount of repairs in the coming season.

DUNDAS STREET BRIDGES.—The sidewalks of this bridge were entirely renewed, and some patching done to roadway planks. A new wearing course must be put on during the coming year. A new stairway was built on the north side for access to cottage.

SHERBOURNE STREET BRIDGE.—Some considerable repairs were made to deck planking, but during the coming season it will require an entirely new wearing course.

DUPONT STREET CULVERT.—This culvert should be entirely rebuilt. Since the street cars passed over it it is very much shaken. I think the better way would be to lay a 5 or 6-feet steel cylinder in the bed of the stream and cover it for about 18 inches with concrete, then fill to the roadway. New railings and cross-stays have been put in to give it temporary support.

#### ISLAND BRIDGES AND DOCKS.

The deck on the west side of the Island Park wharf, including the major portion of the joists and stays, has been removed and replaced with new lumber; the walings and snubbing posts repaired and renewed where necessary, and rebolted.

A new wharf has been erected near the iron bridge to accommodate the delivery and collection of freight, and has been connected with the sidewalk.

A new wharf has been erected near the Sick Children's Hospital to accommodate the residents on that part of the Island, and for the convenience of the Hospital during the summer.

The foot bridge at Clandeboye Avenue has been repaired.

The foot bridge at Chippewa Avenue has been widened so as to accommodate fire hose reels, and repaired.

A new shelter at the Island Park wharf has been designed and erected (the contract was awarded to Mr. Peter Arnott), as a cost of \$2.654. This is to replace the present shelter, and is divided into two portions, longitudinally, for the use of the Ferry Company's passengers and for a shelter for the public visiting the Park. The space covered is 112 feet x 42 feet.

Twenty new seats were made and fixed on posts along the lake shore where directed.

#### ESPLANADE AND CITY DOCKS.

The planking at the south end of the Yonge Street dock has been repaired and renewed where necessary, and the snubbing posts restayed and bolted.

The planking around the gateways to Geddes' wharf and at the entrance to the Ferry Company's wharf has been repaired and much of it renewed.

The planking on the roadway, from Harbour Street to Lake Street, wants constant attention. A large portion was renewed and some taken up and relaid. I think this plank road, which needs constant repairs, should be made into a good macadam road.

At the Turbinia landing, after the warehouse was built, the floor was too high for the wharf, so the wharf deck was taken up and relaid at required level and brought close to the warehouse.

Some slight repairs were done at the Brock Street wharf, but only such as to make it safe.

#### LIFE SAVING STATIONS.

All the various stations have been provided with the necessary appliances, all of which have been regularly and systematically visited,

and any of the appliances that were damaged or missing, were at once replaced and a careful search made for missing one, often with success. It is necessary that these stations be extended in their usefulness by any new device that may be secured. Six improved grapuells have been purchased and placed in offices or warehouses. These are for use only near the docks. I am of opinion that all along our wharves should be placed loop chains within reach of anyone falling into the docks, with short, permanent ladders at intervals. A lifeboat station should also be established at some central point, and a boat or boats ready at all times to patrol the bay and Island waters. This boat or launch would enable the inspector to visit the stations much more frequently and rapidly.

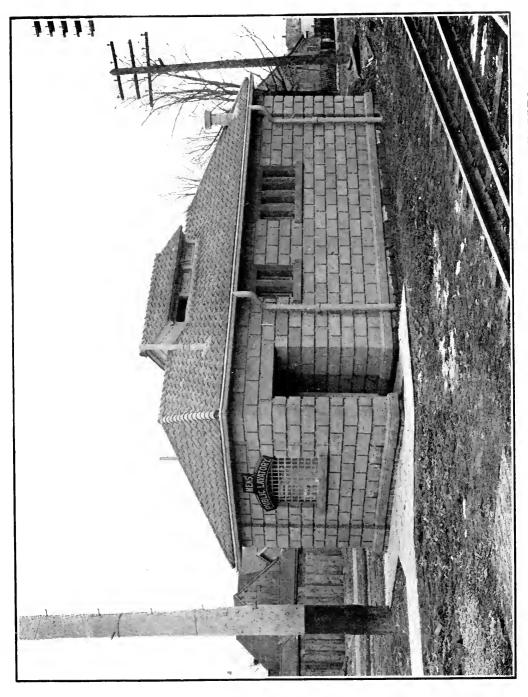
#### FREE BATHING STATIONS.

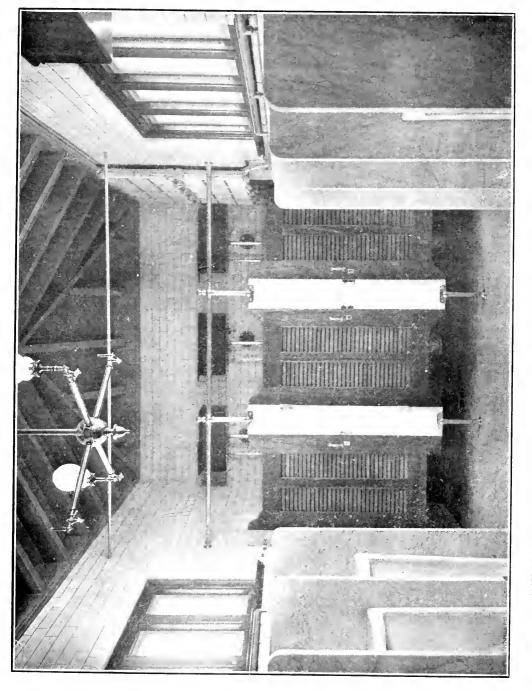
The public, during the last year or two, have taken much greater interest in these bathing stations.\* I think the present temporary shelters we erect from time to time should be made permanent. I refer more directly to those on Fisherman's Island, and on the Western Sand Bar. The station at Sunnyside is very much congested, especially on the boys' side, and I hope we shall be able to use, during the coming season, some 80 or 100 feet of the land east of the present location. Some new bathing houses, fences and shelters will be required. The caretakers at this station I consider very much underpaid, the hours being usually from about 6.30 a.m. until 9 or 10 o'clock p.m., and I am convinced it would be only just to them to make their remuneration somewhat larger. The possibilities of this station are very large if suitable buildings were erected.

#### PUBLIC CONVENIENCES.

Two of these have been or are in course of erection, the one at Yonge and Cottingham Streets was opened to the public on January the 24th, and is very well patronized and very much appreciated, some 280 to 300 people using it every day. The one at Queen Street and Spadina Avenue is not yet completed. So well pleased are the public

<sup>\*</sup> During the season, extending from the 1st July to 1st September, there were 159,208 persons availed themselves of these bathing privileges—and as the Sunnyside station is kept open for 6 weeks longer and the Don station 2 weeks longer, this number was increased to 178,593 for the summer, as per attached tabular statement.







with these conveniences that I am convinced that many more should be erected, and not only for men but some such conveniences should be provided for women.

#### MAIN PUMPING STATION.

 $\Lambda$  steel and concrete floor has been designed for the new engine house floor.  $\Lambda$  portion of it has been placed and finished, but that part around the engine is not yet put in, the stairway to basement also is not yet in place.

Bathers during Season 1905.	May 24th to July 1st.	July 1st to Sept. 1st.	Sept. 1st to close.	
SunnysideBoys  Girls  Western Sand BarBoys Fisherman's Island, by boat  "" by land ""	777	50,128 17,179 24,572 10,731	8,500 1,250 1,405 555	
Don River Boys Woodbine Avenue.		7,041 $3,369$ $26,027$ $20,161$	453 275 2,461 806	
	3,680	159,208	15,705	178,59

#### DETAILS OF COST DURING SEASON 1905,

Bridge, Etc	Nai	ls.	Tools	۲.	Paint	Sun- dries.		Lumber.	Labor.	Total	
Cherry St. Brid Eastern Ave. Binscarth Rd. Riverdale Pk. Gerrard St. York St. Humber River Lamb's Shaw St. Crawford St. Strachan Ave. Dundas St. Sherbourne St. Culverts, Dupont Queen St. Subwa	 16 17 6 8 6 10 38 4		2 7 9	500	3 91 634 14	2 3	5	708 55 292 17 300 55	\$ c. 253 31 104 80 174 50 189 36 371 80 11 90 71 40 236 30 339 66 10 60 211 35 613 30 128 30 17 4c 7 50	356 233 312 273 782 648 238 238 1,065 16 517 955	80 10 65 29 04 95 65 90 77 25
	ĺ						1			5,797	21

## DOCKS, WHARVES, ISLAND LIFE SAVING, FREE BATHING.

					1	_	 		1			-		_
Island Bridges and	34	63					 22	4 84	1,126	54	829	45	2,215	46
Wharves. Esplanade and City	98	61	25	2 28			 		1,362	83	1,307	85	2,791	57
Docks. Life Saving Stat'ns.	5	72					 16	9 22	306	46	542	48	1,023	
Free Bathing Statins Public Convenienc's													$\frac{2,504}{375}$	
							1		ŀ				\$8,909	91

Respectfully submitted,

JOHN WILLIAMS,
Assistant Engineer.

# WATER WORKS.

# REPORT FOR THE YEAR ENDING DECEMBER 31st, 1905.

CITY ENGINEER'S OFFICE,
'Toronto, December 31st, 1905.

#### FINANCIAL.

The total expenditure for the year of the portion of the Water Works Department which is under the control of the City Engineer, amounted to \$662,380.11, divided as follows:

Maintenance	\$171,476	90
Construction	46,670	40
Renewals	-9,709	67
Special Work	385,163	37
Revenue Mains	31,377	71
Personal and Departmental Accounts	17,982	06

The expenditure of the Revenue and Collection Branch, under the control of the City Treasurer, amounted to \$28,547.20.

## DISTRIBUTION.

The total length of mains laid during the year is  $74{,}169\frac{3}{4}$  feet, divided as follows:

$16,445^{1}_{4}$	feet of	36-in.	cast iron	main.
6.130	6.6	24-in.	6.6	
2,2481	6.4	16-in.	+ 6	
$10,832\frac{1}{5}$		12-in.		
*1.353\frac{1}{2}		8-in.	4.6	
36,512		6-in.	4.6	
648	6 =	4-in	6.6	

 $<sup>{}^\</sup>star$  Taken over by the City from the Upper Canada College.

At the end of the year, the total length of mains in use was 286.619 miles.

#### STOP VALVES.

125 Stop Valves were placed in position during the year, making a total in use of 2,586 stop valves and 71 check valves.

#### SERVICES.

3,185 Services were laid during the year.

#### LEAKS ON MAINS.

The average cost of repairs to leaks on mains, exclusive of repairs to asphalt pavement, was \$7.62 per leak, and the average number of leaks per mile of distribution 0.64, the average cost per mile of main being \$4.90.

#### RESERVOIR.

The average depth of water in the Reservoir during the year was 15 feet 1 inch, which represents 20,957,083 gallons. We were unable to empty the Reservoir during the year for cleaning purposes owing to the difficulty of keeping up the supply of water and pressure in the mains.

#### MAIN PUMPING STATION.

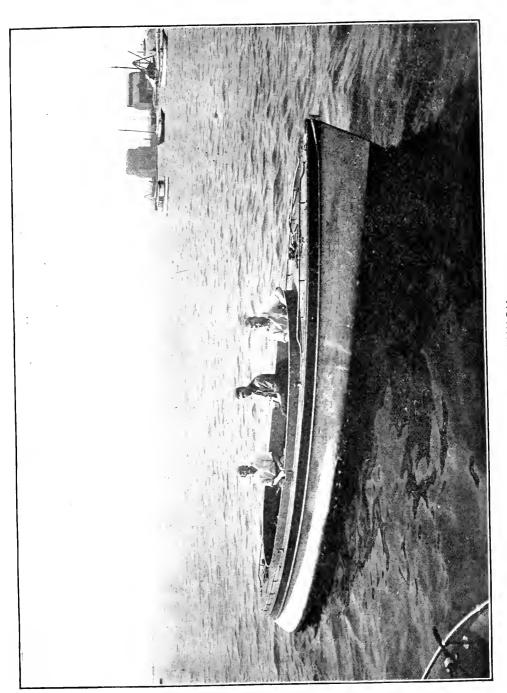
During the year, the average daily consumption was 25,044,681 gallons.

For complete details regarding Water Works matters, reference should be had to the report of the Deputy City Engineer, which follows.

Respectfully submitted,

C. H. RUST.

City Engineer, and Chief Engineer and Manager of the Water Works.





# Report of Assistant Engineer in Charge of Water Works.

CITY ENGINEER'S DEPARTMENT,
Toronto, December 31st, 1905.

Mr. C. H. Rust,

City Engineer.

Dear Sir,—I herewith submit the Annual Report of this Department for the year ending December 31st, 1905:

#### DISTRIBUTION.

 $74.169\frac{3}{4}$  feet of mains have been laid this year, consisting of:

$16,445\frac{1}{4}$	feet of	36-inch	cast	iron	main
6.130		24-inch		, **	
$2.248\frac{1}{2}$	• •	16-inch		••	
$10.832 \frac{1}{2}$	• •	12-inch		••	
$*1.353\frac{1}{2}$	**	8-inch		**	
$36,\!512$	**	6-inch		**	
648	••	4-inch		••	

74,169% feet.

At the end of the year the total length of mains in use was 286.619 miles.

#### STOP VALVES.

The number of valves placed in position is as follows:

9 36-inch stop valves.
5 24-inch "
1 20-inch "
5 16-inch "
25 12-inch "
2 8-inch "
73 6-inch "
4 4-inch "
1 3-inch "

There were placed in position one 6-inch check valve, making a total in use of 71 check valves.

<sup>\*</sup> Taken over by the City from the Upper Canada College.

#### HYDRANTS.

Fire hydrants to the number of one hundred and thirty-three have been placed on the streets during the year, consisting of one 4-way, fiftyfive 3-way and seventy-seven 2-way hydrants.

In addition fifty-seven 2-way hydrants have been replaced by 3-way hydrants. Two private 2-way hydrants were placed on the General Hospital main.

One 3-way hydrant and four 2-way hydrants were removed from off the streets, leaving a total of 3,335 hydrants in use.

#### HOUSE SERVICES.

The total number of services laid this year was 3,185, an increase of 56 per cent, over the number laid last year.

#### LEAKS ON MAINS.

The following leaks on mains were repaired during the year:

2 on 36-inch main.

1 " 30-inch "

6 " 24-inch "

2 " 20-inch "

70 " 12-inch "

3 " 10-inch "

2 " 8-inch "

94 " 6-inch "

4 " 4-inch "

184 of all sizes.

The cost of repairs, exclusive of repairs to asphalt pavements, was \$1,402.32, including material used, or an average cost of \$7.62 per leak.

The average number of leaks per mile of distribution is 0.64, and the average cost per mile, \$4.90.

#### STORE HOUSE.

The stock on hand at the end of the year has been checked and found correct.

#### STABLES.

The cost of running this branch for the year was \$6,547. This includes feed, veterinary surgeon, repairs to waggons, harness, etc.

#### METER AND MACHINE SHOP.

The following work has been performed:

#### METER, MACHINE AND BLACKSMITH SHOPS.

General repairs have been done for Main, High Level and Island Pumping Stations, City Hall boiler room, sand pump, City tug, reservoir fountains, and all tools necessary for house services, pipe laying, Sewer Department and stop cock keys.

One hundred and twenty-three services have been cut in mains with the tapping machine.

43 valves and 18 drinking taps were placed on the Island in the spring and taken off in the fall.

78 fountains were connected in the spring and disconnected in the fall.

#### METERS.

#### REBUILT IN SHOP.

5 -inch	3 · i11	ch	1-inch	2-inch	3-i	nch	4-inch
102	67	•	24	12		5	4 214 total.
		TAK	EN OFF FO	R REPAIR	S AND RE	PLACED,	
5-inch	$\frac{3}{4}$ -inch	1-inch	$\hat{1}\frac{1}{2}$ -inch	2-inch	3-inch	4-inch	6-inch
103	-59	34	19	21	8	8	$1 \dots 253$ total.
•			NEW M	ETERS IN	STALLED.		
₫-inch	3-inch	1-inch	$1\frac{1}{2}$ -inch	2-inch	3-inch	4-inch	6-inch
94	57	38	5	52	27	14	9296 total.

103 new meter boxes have been put in.

#### BLACKSMITH SHOP.

General repairs have been done for the various City departments, as well as tools made for same, and 3.265 stop-cock rods have been turned out.

#### HYDRANT AND VALVE DEPARTMENT.

#### NUMBER OF VALVES TESTED FOR TAPPING MACHINE.

3-inch	4-inch	6-inch	8-inch	12-inch
12	40	43	4	4, 103 total

#### NUMBER OF STANDARD STREET VALVES TESTED.

∄-inch	1-inch	₹-inch	1-inch	2-inch	4-inch	6-inch	12-inch	
6	$\tilde{24}$	12	12	84	66	125	24	.353 total.

#### BRASS WORK TESTED.

#### Double Cocks.

5-inch x 1-inch x 1-inch	5-inch x 3-inch x 3-inch	
593	$269\ldots\ldots$	862 total.

## Single Cocks.

₃-inch	ਤ੍ਰ-inch	$\frac{1}{2}$ -inch	³₄-ineh	1-inch
286	574	2,157	146	413,204 total.

# Driving Nipples.

1/2-inch	$\frac{3}{4}$ -inch	₹-inch	
869	595	$586 \dots$	2,050 total.

#### Screwed Nipples.

3-inch	$\frac{1}{2}$ -inch	$\frac{3}{4}$ -inch	1-inch
125	579	98	107909 total.

## Couplings.

<del>}</del> -inch	5-inch	
359	$228 \ldots 587$	total

#### Curb Cocks.

1-inch	2-inch
57	$33, \dots 90$ total

Total num	ber of brass pieces tested	)2
	ber of hydrants tested	
Number of	by-passes fitted to 36-in, valves on new 36-in, main.	6
Number of	hydrants inspected	1
••	" thawed, P. P. & O	26
• 6	" set ξ	50
**	" set with bar and chain	11
	new chain rings put on	61
**	" leather valves	36
**	" nozzles 10	93
44	" cap leathers 30	01

Number of	new screws			
**	" joint rings			 
••	" iron caps			
**	" brass packing nuts			 
	"   jackets			 
**	nozzles caulked	٠.	٠.	 
**	hydrants plugged			 
**	mains blown out	٠.		 

#### RESERVOIR.

The average depth of water in the Reservoir for the year was 15 feet 1 inch, equal to an elevation of 211 feet 1 inch above zero level of Lake Ontario, and containing 20,957,083 gallons.

The lowest elevation of water was 206 feet 5 inches above zero in February, and the highest, 215 feet 9 inches, in November.

The Reservoir could not be spared for cleaning this year for the same reason as last year.

# HIGH LEVEL PUMPING STATION.

1.471.413.966 gallons of water were repumped during the year. The daily average being 4.031.371 gallons per day.

Coal consumed amounted to  $1.423\frac{1290}{26000}$  tons. The cost of running the station was \$11,659.86.

A contract has been let for the installation of a 6,000,000 vertical, triple expansion engine, also for the construction of an engine house capable of holding two such engines.

# ISLAND PUMPING STATION.

Pumping at this Station commenced on the 24th  $\Lambda$ pril, and continued till the 1st of November, when Station was shut down for the season.

A contract was let to the Polson Company for the installation of a second boiler for this station.

The coal used was  $125\frac{7.50}{2000}$  tons, and the cost of maintenance, including services, mains, hydrants and repairs, \$3,246.99.

#### MAIN PUMPING STATION.

The pumpage for the year was 9,174,732,461 imperial gallons; of this quantity—

 Nos. 1 and 2 engines pumped.
 1.861,541,927 gallons

 Nos. 4 and 5 engines pumped.
 6.826,915,490 gallons and

 No. 6 engine pumped.
 486,275,044 gallons.

Coal consumed under boilers for No. 1 and 2 engines,  $7.107_{\,2000}^{\,115}$  tons. Coal consumed under boilers for No. 4 and 5 engines,  $9.606_{\,2000}^{\,159}$  tons. Coal consumed under boilers for No. 6 engine,  $542_{\,2000}^{\,830}$  tons.

For the year the average daily pumpage was 25,136,253 gallons.

The cost of operating the Station for the year was:

For coal and cartage	\$49,644 31
For wages, oil, waste and repairs	39,785 35
•	
	\$89,429 66

The new 15-million gallon vertical, triple expansion engine has been installed, and although still in the contractors' hands, is now pumping water into the system. The engine is a fine piece of workmanship, and gives every indication of being able to meet the contract requirements. It is a credit to the designers, the Allis-Chalmers Company, and to the constructors, the John Inglis Company of this City.

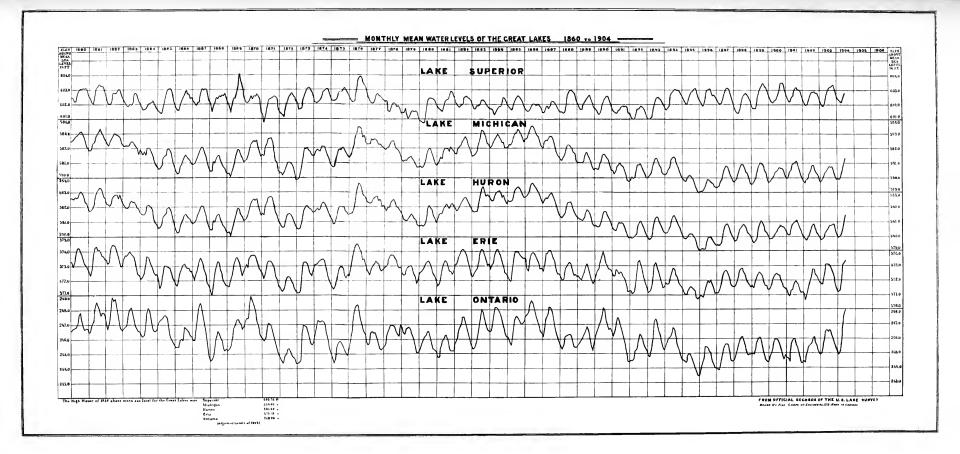
It is to be hoped that the Council can see its way to ordering another engine of similar capacity the coming year. While the average pumpage per day for the year was 25,136,253 gallons, yet during the busy hours of the day (between 9 in the morning and 4 in the afternoon), the pumpage runs up to over 30 millions, so that in order to keep up the pressure and the Reservoir, it is necessary to run Xo. 1 Worthington, No. 4 Blake, as well as No. 6, the new 15-million gallon engine. As the engines and boilers are all in separate engine and boiler rooms, three staffs of firemen and engineers have to be employed, when one would do if the 15-million gallon engine were duplicated. Considerable saving in coal and wages could be effected by such duplication.

#### SPECIAL MAINS.

The 36-inch main, from corner of Bathurst and College Street to

S OF THE CREAT LA

1883 1884 1885 1865 1902 1903 1904 1905 1906 ELEV MEAN ABOVE MEAN SEA LEVEL IN FT. S OF THE GREAT LA SUPERIOR 604.0 603.0 602.0 601.0 584.0 MICHICAN \$83.0 582.0 581.0 550.0 HURON 579.0 583.0 582.0 581.0 580.0 ERIE 579,0 574.0 573.0 572.0 571.0 ONTARIO 570.0 248.0 247.6 246.0 245.0 244.0 243.0 RECORDS OF THE U.S. LAKE SURVEY PR OF ENGINEERS, U.S. ARMY IN CHARGE



the outside edge of the Rose Hill Reservoir, a distance of 16,700 feet, has been completed at a cost of \$171,688.42.

The 24-inch main, from corner of Church and Front Streets to the corner of Queen and Sumach Streets, has also been laid, and a 16-inch main carried east from same, along Queen Street to the corner of Broadview Avenue and Queen Street.

#### SIX-FOOT CONDUIT.

The contractor for this work has laid the whole of this conduit, from the shore crib to the south tunnel shaft, a distance of over 5,000 feet, and the greater part of the filling over same has been completed. Some 2,200 feet of this conduit is now in use, but the balance cannot be utilized till the tunnel, to which it is to be connected, is completed.

A contract has been let for the construction of a tunnel, about 5,130 feet long, from the north end of the six-foot conduit carried under the Bay to the Pumping Station at the foot of John Street, the area of same being equal to that of a cylinder 8 feet 4 inches in diameter. The contract price is \$269,000.

#### TEMPERATURE OF WATER.

The average temperature for the year, taken at the shore crib, was 16 degrees Fahr. The highest temperature, 66 degrees Fahr., on September 19th, and the lowest, 33 degrees Fahr., on January 16th.

#### SAND PUMP.

Commenced work on April 24th, filling in to the north and east of the Sick Children's Hospital, and continued there till the 27th of May. From that date till 15th June it was engaged deepening channel from Hospital and towards Island Pumping Station. It was then moved to Cherry Street and Keating's Cut, where it worked till 14th July. Then moved to Ward's Island and worked till August 3rd, when it was sent to Long Pond, working there till 21st September, when it moved to western sand bar, filling in behind cottages till October 14th: then to Hanlan's Point, working there till 21st October, when it was taken to the Lighthouse Channel and continued working there till November 22nd, after which it was towed to the Water Works dock and laid up for the season.

#### HIGH PRESSURE FIRE SYSTEM.

Contracts for this work have been let as follows:

For two 5-million gallon stage turbine pumps, steam turbine driven.

" 4.440 ft, of 20-inch tlanged pipe at	. \$40	34	per to:
" 2,220 ft, of 20-inch spigot and socket pipe at	. 30	84	**
" 23,856 ft. of 12-inch spigot and socket pipe at	. 30	72	** '
" 14,964 ft. of 8-inch spigot and socket pipe at	. 30	94	**
" 10 20-inch stop valves, hub ends, at	. 184	00	each
" 2 20-inch stop valves, flanged ends, at	. 198	00	••
" 68 12-inch stop valves, hub ends, at	. 64	80	• 6
" 64 S-inch stop valves, hub ends, at	. 30	45	**
" 141 S-inch stop valves, flanged ends, at	. 32	50	**
" 141 3-way hydrants, at	. 124	50	••

Specifications, tenders, plans, etc., have been prepared for cast iron and cast steel special castings, as well as for the engine house for the turbines.

Yours, etc.,

C. L. FELLOWES.

Deputy City Engineer.

# SCHEDULES WATER WORKS DEPARTMENT



1904 AND 1905.

	1905.				
a	ter.		Со	al.	
	Total Quantity Pumped	Quant Consun		Tota Consum <sub>l</sub>	
Jar <sup>t.</sup>	Imp. Gals. Net.	Tons. 579	Lbs. 1,835	Tons.	Lbs.
Fet –	777,181,414	863 	300	1,443	1,045
Ma:	762,670,979	$-\frac{789}{792}$	$\frac{1,560}{-1,950}$	1,553	1,860
Api	823,178,466	$\frac{582}{547}$	$\frac{760}{1,470}$	1,675	710
Ma	725,986,785	874 539	90 <b>0</b> 	1,422	370
Jun	743,370,206	863 557	390  830	1,402	1,090
July	735,198,455	$ \begin{array}{r}     557 \\     820 \\     \hline     552 \end{array} $	1,900 $$ $500$	1,378	730
Aug	767,678,233	816	1,030	1,368	1,530
Sep	806,683,749	744 852 	300 1,210	1,596	1,510
Oct-	802,883,764	730 822 	1,710 $1,880$	1,553	1,590
Nov-	768,575,379	666 824	1,990 760	1,491	750
Nov		468 636 160	780 $670$ $1,020$		
Dec	736,248,375	$-\frac{160}{162}$ $\frac{162}{559}$	1,750 880	1,265	47(
	725,076,656	381	1,810	1,104	440
	9,174,732,461			17,256	095
	25,136,253			47	555

SCHEDULE No. 5.

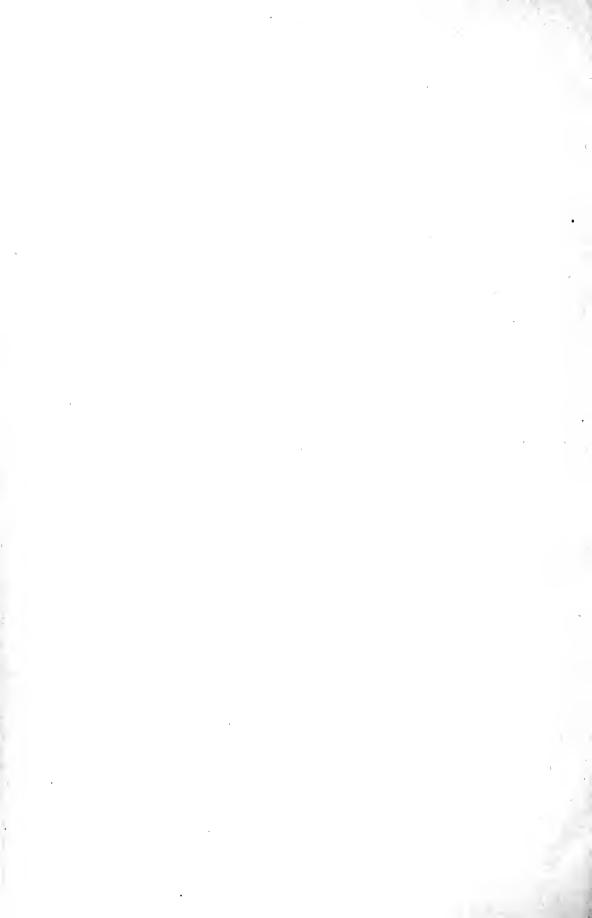
Comparative Statement of Coal Consumed and Water Pumped by Months for the Years 1904 and 1905.

			1904.					1905.			_
MONTH.		Wa	ter.	Co	al.		Wa	ter.	Со	al,	
	Engine Nos.	Quantity Pumped.	Total Quantity Pumped.	Quantity Consumed.	Total Consumption.	Engine Nos.	Quantity Pumped.	Total Quantity Pumped	Quantity Consumed.	Total Consump	
January	1 and 2 4 and 5	1mp. Gals. Net. 182,093,058 623,205,104		Tons. Lba. 651 875 818 1,135	Tons. Lbs.	1 and 2 4 and 5	1mp.Gala. Net. 161,003,255 616,178,159		Tona. Lbs. 579 1,835 863 1,210	Tons.	
February	1 and 2 4 and 5	182,127,209 572,784,072	805,298,162	676 770 743 920	1,470 10	1 and 2 4 aud 5	200,549,016 562,121,963	762,670,979	764 300 789 1,560		
March	1 and 2 4 and 5	178,655,288 627,884,293	754,911,281 806,539,581	689 570 863 500	1,419 1,690 1,552 1,070	1 and 2 4 and 5	213,352,692 609,825,774	823,178,466	792 1,950 882 760	1,553	710
April	1 and 2 4 and 5	162,910,933 591,726,5 <b>2</b> 5	754,637,458	577 25 785 5	1,362 30	1 and 2 4 and 5	144,949,121 581,037,664	725,986,785	547 1,470 874 900	1,422	370
•	1 and 2 4 and 5	164,435,202 606,290,831	770,726,033	548 1,135 814 515	1,362 1,650		144,302,224 599,067,982	743,370,206	539 700 863 390	1,402	
	1 and 2 4 and 5	132,330,102 584,873,191	717,203,293	467 640 764 450	1,231 1,090	1 and 2 4 and 5	143,772,825 591,425,630	735,198,455	557 830 820 1,900	1,378	730
,	1 and 2 4 and 5	158,683,251 604,546,078	763,229,329	530 520 806 1,400	1,336 1,920	1 and 2 4 and 5	157,986,506 609,691,727	767,678,233	552 500 816 1,030	1,368	1,530
	1 and 2 4 and 5 1 and 2	154,641,514 606,423,351 ————————————————————————————————————	761,064,865	572 1,970 818 880 	1,391 850	1 and 2 4 and 5	198,882,069 607,801,680 	806,683,749	744 300 852 1,210 730 1,710	1,596	1,510
·	4 and 5	595,335,106	755,523,281	815 180 526 1,860	1,373 1,940	4 and 5	599,478,053 	802,883,764	822 1,880 	1,553	1,590
	4 and 5	597,319,093	735,591,678	825 1,660 493 930	1,352 1,520	4 and 5	595,620,084	768,575,379	824 760 468 780	1,491	750
	4 and 5	586,127,956	710,670,429	781 1,490	1,275 420	4 and 5	456,158,396 180,118,858	736,248,375	636 670 160 1,020	1,265	470
December	1 and 2 4 and 5	132,487,846 608,828,339		491 1,755 800 1,380		1 and 2 4 and 5 6	20,412,092 398,508,378 306,156,186		162 1,750 559 880 381 1,810		
			741,316,185		1,292 1,135			725,076,656		1,104	440
			9,076,711,575		16,421 1,326			9,174,732,461		17,256	095
Daily averaga	J	•••••	24,799,758	· · · · · · · · · · · · · · · · · · ·	44 1,73	ill		25,136,253	ļ	47	553

SCHEDULE No. 4.

Record of Water Re-pumped at High Level Station for the Year 1905.

Percent   Net.   Acetage   Boilers   Raising	Month.	Number of Hours Engines working.	of Hours working.	Number of Revolutions made by Pumps	evolutions ?umps	Quantity of W Re-pumped	Quantity of Water Re-pumped.	Total Quantity of Water Re-pumped of by both Engels of Reconnections in Reconnection of the Reconnection o		Total Quan- bity of Water Re-pumped	e Pressure pree Mains.	e Pressure otion Mains	Fotal Quantity of Coal Consumed		Coal Consumed for Banking Fires,		Coal Con- sumed while Pumping.
uy         h. m.         h.		No. 1.	No. 2	No. 1.	No. 2	No. 1.			<u> </u>		ул по Эл по	gвтөч А п2-по	Boilers		Raising team, et		•
uery         48 00         672 00         1,635,435         6,629,536         47,26,475         112,011,611         1         10,894,464         60,1         4,61         11         438         10           h         486 00         744 00         1,555,953         1,061,255         2,227,382         47,736,475         119,882,326         1         118,74,018         50.25         14.81         13         1,01         1 </td <td>January</td> <td>b. m. 498 00</td> <td>h. m. 742 00</td> <td></td> <td>1,101,950</td> <td>1</td> <td>49,587,750</td> <td>121,136,545</td> <td>119.8</td> <td></td> <td>Lbs. 50.22</td> <td>Lbs. 14.92</td> <td></td> <td>_</td> <td>Т</td> <td>bs. Fons 200 108</td> <td>ns Lbs. 3 785</td>	January	b. m. 498 00	h. m. 742 00		1,101,950	1	49,587,750	121,136,545	119.8		Lbs. 50.22	Lbs. 14.92		_	Т	bs. Fons 200 108	ns Lbs. 3 785
h.	February	448 00	672 00	1,437,803	1,035,435		16,594,575			191,161	50.18	14.61	111			300 101	138
482 10, 720 00	March	196 00			1,061.255	72,227,382	47,756,475			84,018	50.05	<u>x</u>				1,800 107	1,201
488         1         1,621,897         1,168,488         73,982,813         62,598,160         126,530,973         1         125,265,663         60,23         14,51         125         11,13         11,13         11,13,856         74,676,010         71,040,600         126,140,530         1         125,243,63         60,23         11,15         12,13         11,13,856         74,676,010         71,435,220         126,140,530         1         124,888,034         60,12         13,83         120         13,83         120         13,83         120         13,83         120         13,83         120         13,83         13,83         13         13,73         13         13         13,83         13         13,73         13         13         13,83         13         13,73         13         13         13,83         13         13,83         13         13,73         13         13         13,83         13         13,73         13         13         13,83         13         13,73         13         13         13         13,73         13         13         13,73         13         13         13,73         13         13         13         13,73         13         13         13         13         13 <t< td=""><td></td><td>485 10</td><td></td><td>1,555,953</td><td></td><td>70,795,861</td><td>49,026,465</td><td>119,822,326</td><td>118,6</td><td>24,102</td><td>50.34</td><td>14,75</td><td></td><td></td><td></td><td>1,000 109</td><td>3.14</td></t<>		485 10		1,555,953		70,795,861	49,026,465	119,822,326	118,6	24,102	50.34	14,75				1,000 109	3.14
st         49         720         00         1,556,219         1,102,200         74,076,010         51,473,520         126,149,530         1         119,202,894         49.98         11,58         11,58         11,50         1,53         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83         11         1,133,83 <td>May</td> <td>498 00</td> <td></td> <td>1,624,897</td> <td>1,168,848</td> <td>73,932,813</td> <td>52,598,160</td> <td></td> <td></td> <td>899,663</td> <td>50.23</td> <td>14.51</td> <td>125</td> <td></td> <td></td> <td>400 114</td> <td>1 595</td>	May	498 00		1,624,897	1,168,848	73,932,813	52,598,160			899,663	50.23	14.51	125			400 114	1 595
st	June	00 08 <del>f</del>		1,556,219	1,102,200	70,807,964	49,599,000			802,894	49.98	1. 				1,000 102	150
498 00         744 00         1,656,796         1,181,121         75,384,218         53,168,945         128,548,163         1         127,262,681         49.08         13.50         121         1,774         11           506 00         720 00         1,581,061         1,111,202         74,495,785         54,569,970         127,199,875         1         125,243,162         49.86         10.60         11         1,612         1           506 00         734 00         1,640,333         1,178,396         74,495,785         52,704,090         127,199,875         1         125,243,162         50.69         11,613         1         1,613         1         1,626,386,341         51.69         11,613         1         1,613         1         1,613         1         125,243,162         50.69         1         1         1,613         1         1,614         1         1,614         1         1,614         1         1,264,455         78,322,203         56,990,475         130,312,678         1         1,411,413,966         603,42         177.72         1,223         1,223         1,411,413,966         603,42         177.72         1,223         1,229         1,411,413,966         603,42         177.72         1,223         1,229         1,411,413	July	497 10		1,611,231	1,143,856		51,473,520	126,149,530	124,8	888,034	50.12	13.83				400 103	1,133
150         00         720         00         1,581,061         1,212,666         71,938,275         54,569,970         126,508,245         1         125,243,162         49.86         10.60         11.81         1,612         1         1,612         1         1,613         1         1,613         1         1,613         1         1,613         1         1,613         1         1,613         1	Angust					75,384,218	53,163,945			262,681	49.98	13.50				400 110	1,374
21         30         0         734         0         1,637,270         1,117,202         74,495,785         52,704,000         127,109,875         1         125,3927,876         50,60         11.83         11.83         11.192         11.192         11.112,202         74,495,785         127,109,875         1         126,386,311         51.55         17.35         119         1.80         11         1.80	September			1,581,061	1,212,666		54,569,970		_	243,162	49.86	10.60				1,000, 109	9 613
513 00         687 00         1,640,333         1,178,396         74,635,151         53,027,820         127,692,971         1         126,386,341         51.55         17.72         119         1,860         10         1           507 00         744 00         1,611,477         1,266,455         73,322,203         56,990,475         130,312,678         1         129,009,552         50,29         22.39         17         1,105         1         1         1,471,413,966         603.42         177,72         1,210         1         1         1         1,471,413,966         603.42         177,72         1,29         131         1         1         1         1,471,413,966         603.42         177,72         1,29         131         1         1         1         1,471,413,966         603.42         177,72         1,29         131         1	October	506 00	734 00	1,637,270	1,171,202		52,704,090			927,876	50.69	<u>x</u>				400 104	1,092
567 06         744 00         1,611,477         1,266,455         73,322,203         56,990,475         130,312,678         1         129,009,552         50.28         17,105         10         11,105         11,105         11,105         11,105         11,105         11,105         11,105         11,105         11,105         11,105         11,105         11,10	November	513 00		1,640,333	1,178,396		53,027,820	_	_	386,341	51,55	17.35				002,1	160
5,903 20         8,704 00         19,102,956         13,713,161 869,184,493         617,092,245         1,486,276,738         1         1,471,413,966         603.42         177.72 1,423         1,290 131           491 56         725 20         1,591,913         1,142,763         2,481,327         1,690,663         4,071,991         1         4,031,271         50.28         14.81         3         1,800         1	December			1,611,477	1,266,455		56,990,475			09,552	50.22	22,39	1			1,700 106	3 1,405
491 56         725 20         1,591,913         1,142,763         72,432,041         51,424,353         123,856,394         1         122,617,830         50.28         14.81         118         1,274         10           16 10         23 50         52,336         37,570         2,381,327         1,690,663         4,071,991         1         4,031,271         50.28         14.81         3         1,800	:		8,704 00	19,102,956	5	869,184,493	617,092,245			113,966	603, 42	177.72				300 1,292	990
$16\ 10  23\ 50  52,336  37,570  2,381,327  1,690,663  4,071,991  1  4,031,271  50,28  14.81  3  1,800$	Monthly Averages			1,591,913		72,432,041	51,424,353	123,856,894	122,(	017,830	50.28	<u>x</u>				1,858 107	7 1,415
	Daily Averages		23		37,570	2,381,327	1,690,663	4,071,991	); +	131,271	50.2×	1.1.81		800	7	218	3 1,082



No. 4.	on which Engines were working.	No. of Days On which Number of Hours Conness were working each working. Month.	of Hours g each ath.	Number of Stroke made by Engines each Month.	Strokes ingines nth.	Quantity of Water Fump of each Month by each Engine Imperial Gallons, Gross,	the frump of the by each luperiad Gross.	Total Quantity Pumped by Nos. 1&5 Engines.	IS to surt	Total Quan- tity Pumped. Imp. Gallons	e Pressur umps,	e Lift by	Total tity o used Boiler	Fotal Quantity of Coal used under
	No. 4. No. 5.	No. 4.	No. 5.	No. 4.	No. 5.	No. 4.	No. 5.	Imp. Gallons Gross		Net.	Ауегад 1Ч по	Атегад Епді	Mo	Month.
January 31	E	h. m.	h. m. 715 00	1,456,554	1,530,573	307,332,891	321,420,330	628,753,224	171	616,178,159	Pounds.	Ft. In. 21 6	Toms.	1,210
February	ž	661 40	670-30	1,320,530	1,404,581	278,631,830	294,362,010	573,593,810	31	562,121,963	8.26	25.	5.25	1,560
March	<u></u>	21: 012	735 55	1,140,638	1,515,698	303,974,618	318,296,580	622,271,198	÷1	609,825,774	94.1	33	7 882	760
April 30	£	704 35	716 55	1,357,706	1,459,141	286,475,966	306,419,610	502,895,576	21	581,037,661	53.0	2.5	 27x	000
May 31	<u></u>	715 15	749 00	1,386,240	1,518,082	292,496,640	318,797,220	611,293,860	÷1	599,067,982	8.19	1.6	Ê	330
June 30	30	21. 717	869	1,397,821	1,469,311	294,940,231	308,555,310	603,495,541	2.1	591,425,630	95.0	23 10	820	006,1
July 31	31	741 55	738-50	1,437,416	1,518,521	363,291,776	318,839,610	622,134,116	3.1	609,691,727	94.1	23.	218	1,030
August 31	<u></u>	749 45	722 05	1,457,806	1,488,613	307,587,066	312,668,730	620,205,796	?1	089,108,709	5.16	) 17	852	1,210
September 30	30	715 50	715 20	1,414,709	1,491,170	298,503,599	313,208,700	611,712,299	3.1	599,478,053	91.3	2	8.22	1,830
October 31	E	705 55	728 30	1,381,276	1,506,316	291,119,236	316,326,360	607,775,596	21	595,620,084	93.3	77	32	992
November 30	90	702 10	105 00	1,327,642	882,519	280,132,462	185,335,230	165,467,752	21	156,158,396	<u>2</u> .	21	5 636	029
December 29	=	659 10	299 05	1,300,013	630,153	271,309,073	132,332,130	106,641,203	31	398,508,378	ž	0 17	526	0xx
Totals 363	£ 23	8,518 35 7,913		52 16,678,381	16,414,771	16,414,771 3,519,138,391 3,447,101,910 6,966,240,301	3,447,101,910	6,966,240,301	31	6,826,915,190	1,121,1	5000	909'6	1,150
Monthly Averages   30.2	 	12 23	712 19	588,865	1,367,897	293,261,532	287,258,192	580,520,025	÷1	568,909,621	93.1	167		500,1 008
Daily Averages	:	28 95	9 <del>1</del>	45,691	14,971	9,611,175	9,111,111	986,680,91	÷1	18,703,873	1.53.			<u>53</u>

November	15	298 10	311,580	181,938,240		180.118,858	6.08	255	991	160 1,020
December,	55	179 25	585,699	309,248,672	_	306,156,186	90.6	9.	381 1,810	1,210
Totals	37	777 35	930,279	491,186,912		1 486,275,014			512	542 830



For Schedule No. 10, "Analysis of Expenditure at Main Pumping Station," see page 138 Norm. For Schedule No. 1, "Cash Expenditure on Maintenance Account," etc., see page 138.

SCHEDULE No. 2.

sumed per Month by Engines. Nos. 1 and 2

Quantity of Coal Con-

Total

Tons. l.bs. 579 1,835

1,950 074,1 700 £30 500300

539

5521.1.1

557

300

764 79.55.17 1,710

730 999

1,990

 $^{780}$ 1,750 115503 37.6

£68

163

7,107

595 2

				ž	TATEME	o TNS	ь Warer	PUMPED BY	BY ENGINES NOS	s. 1 AND 2 FO	Statement of Wayer Pumped by Engines Nos. 1 and 2 for the Year 1905.	105.				
Month.	No. of on wh Engines Worki	No. of Days on which Engines were Working.	Num N Ea	nber of H Working nch Mont	Number of Hours Working Each Month.		Number of Strokes for Each Engine per Month.	Strokes Engine mth.	Quantity of Water Pumped per Month Each Engine in Imp. Gals. Gross	Quantity of Water Pumped per Month by Each Engine in Imp. Gals. Gross.	Total Quantity Pumped in Imp. Gals.	difa to sast	Total Quantity Pumped in Imp. Gals.	ge Pressure	ge Level of	Zero.
	No. 1.	No.	S	_:	S. S.	21		No. 2	Z o Z	No.	(iross.	Ретсеи	Net.	Averag	вчетА	Belo
January	2. X	25.5	# E	<u> </u>	39.5	E 25	212,346	215,001	55,254,888	112, 156,836	167,117,731	-	161,003,255	Lbs. 94.4	Ft.	z x
Pebruary	20	3.1 X	177	Ξ	651	90	143,144	381,027	32,636,832	176,268,393	208,905,225	7	200,549,016	95.2	2	0
Mareh	56	35	307	50	730	rc.	198,989	385,344	45 369, 192	176,872,896	222,242,388	77	213,352,692	96.4	55	0.
April	25	71	372	35	698	100 100 100	248,825	205,352	56,732,100	94,256,568	150,988,668	7	141,919,121	9.96	2	7.0
May.	33	678	425	13	316	98	287,560	181,643	65,563,680	84,751,137	150,314,817	-	144,302,224	1.96	15	n
June	30	25.	38	7.3	359	13	257,215	198,500	58,651,860	91,111,500	149,763,360	<b>÷</b>	143,772,825	2.96	61	=
July	<u> </u>	32	=======================================	13	369	-8	311,281	116,802	70.972,752	93,596,526	161,569,278	÷	157,986,506	96.1	$\frac{\infty}{\infty}$	Ξ
August	3.7	56	139	7.3	52.53		280,818	311,842	61,033,314	113,135,478	207,168,822	-	198,882,069	5.1.6	61	r3
September	25	8	555	50	702	50	175,569	371,407	10,028,136	171,852,813	211,880,949	-	203, 105, 711	95.9	19	x
October	1.9	<u></u>	61-1	00	999	30	100,584	342,546	22,933,152	157,228,614	180,161,766	<b>-</b>	172,955,295	95.0	33	-#
November	9	:3	<u>x</u>	95	319	35	115,640	169, 135	26,365,920	77,770,665	101,136,585	<b>-</b>	121,121	93.0	13	x
December	=		150	13			93,257		21,262,596		21,262,596	7	20,412,092	89.5	13	2)
Totals	292	21 22	3,683		00 5,439	- Si	2,155,281	3,005,014	559,804,752	559,804,752 1,379,304,426 1,939,106,178	1,939,106,178		1,861,541,927 1,139.6	Ī	23.5	
Monthly averages	24.5	23.6	306	55	<u> </u>	1.0	201,607	250,417	46,650,396	114,941,785	161,592,198	+	155,128,493	6.75	9	7
Daily averages	:	:	=	5.0	#	#6	6,726	8,506	1,533,711	3,780,277	5,312,619	7	5,100,114	94.9	61	7



Comparative Statement Showing Number of Gallons Pumper, Quantity and Cost of Fuel, Etc., from 1876 to 1905, Inclusive. SCHEDULE No. 6.

	Year.	Total Water Pumped Quantity of Fuel. Imp. Gals. Lbs	Quantity of Fuel. Lbs	Total Cost of Fuel.	Average Daily Quantity of Average Daily Water Pumped Consumption of Coal. Imp. Gals. Lbs.	Average Daily Consumption of Coal. Lbs.	Water Pumped per Pound of Fuel Imp. Gals.
1576		1,625,139,876	6,998,282	\$19,645 75	202,154,4	19.093	232.02
: : : : : : : : : : : : : : : : : : :		2,633,133,932	8,120,000 8,120,000	25,556 23 15,196 20	7. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	28.515 5.525 5.525 6.525	174,55
27.5		1,610,104,542	10,872,211		1,411,245	787,62	115,00
: •		1,785,859,706	11,694,808		1,879,122	31,953	152.17
[7.2]		1,910,430,119	12,391,874		5,234,056	33,950	154.18
11.22		2,108,933,115	11,685,556		5.777.53	32,015	170, 17
1889		2,809,965,484	17,266,679		7,698,511	17,306	162.74
7.		3,645,112,082	19,920,782		9,960,224	51,428	183.00
: :: :: :: :: :: :: :: :: :: :: :: :: :		0,004,170,000 1,121,276,000	12,044,450	10,080 27	11 297 060	100.40	180.13
		4,117,938,169	23,283,900	50.051 85	12,103,940	63,791	1.55.7
		1,011,964,514	20,457,935		11,073,875	94,049	197.57
ISSO		1,148,781,634	19,231,940	14,135 10	11,366,525	52,690	215.72
1890		5,249,760,226	34,615,830		14,382,904	67,536	212.96
1891		6,207,656,403	29,300,240	60,012 77	17,007,275	80.591	211.86
1892		6,659,925,650	34,505,875	71,805 25	18,246,371	94,278	193.00
1893		6,646,021,488	26,013,840	98 73E'F9	18,208,278	71.270	255.47
		6,589,492,142	26,822,145	54,902 85	18,053,403	73,485	245.67*
932		6,639,680,218	21,178,879	40,221 85	18,190,902	58,024	813.5*
		6,718,187,980	18,606,508		18,527,836	50,837	361.4
7881		6,723,757,030	20,711,250	26,880 50	18,421,253	56,743	321.64
1838		7,136,334,102	22,100,145	27,572 00	19,551,600	×+6, E3	322.91
1899		7,824,848,217	24,682,935	26,684.57	21,436,569	67,612	316.99
1900		8,064,384,595	24,148,565	38,668 54	22,094,204	66,160	333.95
1961		8,299,298,465	26,292,640	39,402.87	22,463,831	72,034	314.89
1902		7,998,916,325	23,769,930	39,260-22	21,901,140	• 64,575	339.15
1903		8,735,658,003	30,260,615	54,275 93	23,933,309	82,900	288.68
1904		9,076,711,575	32,843,325	55,784 05	24,799,758	89,735	276.36
5061		9,174,732,461	34,512,095	19,614 31	25,136,253	94,553	265,84

SCHEDULE No. 7.

QUANTITY OF WAIER PUMPED AND QUANTITY CONSUMED DURING EACH MONTH OF 1905, WITH AMOUNT OF DAILY CONSUMPTION.

Month.	Total Quantity Pumped per Month in Imperial Gallons	Total Quantity in Reservoir at Pumped primed during Pumped each South in Per Month.  Total Quantity in Reservoir at Quantity Consumption of Consumption of each sumed during Consumption of Consumption of Consumption of Month.  Water. Coal at Main each Month.  Imperial Gallons Imperial Gallons Imperial Gallons Pumping Station	Quantity Consumed during each Month.	Average Daily Consumption of Water. Imperial Gallons	Average Daily Consumption of Coal at Main Pumping Station	baily on of fain tation
					Tons.	Lbs.
of the December, 1904.		23,794,967		000000000000000000000000000000000000000		
stored in Reservoir on Jist December, restrict	777 181 414	17.292,166	783,684,215	25,280,136	1,443	0.4.0, 1
January	269 670 979	13.892.918	766,070,227	25,535,674	1,553	1,350
February	893 178 466	91,188,782	815,882,602	26,318,793	1,675	710
March	795 986 785	98,339,439	733,130,442	24,437,680	1,422	370
April	7.13, 370, 906	267,404,797	747,297,848	24,106,382	1,402	1,030
May	795,010,020	98 185 187	736,418,115	24,547,270	1,378	130
June	767 670 509	19 810 900	771,053,170	24,872,682	1,368	1,530
July	000,010,101	10,11,010	810 349 989	96.140.299	1,596	1,510
Angust	806,683,749	16,144,000	001,040,000	96 794.540	1,553	1,580
Sentember	802,883,764	17,292,100	001,100,100	91 791 199	1,491	750
	768,575,379	19,419,756	(66,444),789	24,124,122	1000	22.5
October	736.248.375	25.217.904	730,450,227	24,348,340	1,200	2
November	725,076,656	21,786,475	728,508,085	23,500,260	1,104	4+10
	9,174,732,461		9,191,028,267	300,536,178	17,256	095
Lorais				100 110 20	1 190	005
Averages	764,561,038		765,919,022	25,044,061	1,400	969

SCHEDULE No. 8.

	I	
INCLUSIVE.		
1905,		
5 TO	l	
180		
YEARLY,		
DEPARTMENT		
OF		
INCREASE		
SHOWING		
STATEMENT		
COMPARATIVE		

	No. 5, Blake Engine.								-							:	:	: : : : : : : : : : : : : : : : : : : :	:	:		99.24	99.09	100	7.06	95.9	93.3	93.5	93.2	92.6	93.5	93.1	93° f	
Pumps.	No. 4, Blake Engine.													:	:	:	:	:	:		96.37	95.24	60.03	95.4	95.7	95.9	95.3	93.5	93.2	95.6	93.2	133.1	1.85	
Average Pressure on Pumps	No. 3, Inglis & Hunter.											22.25	101.00	10.1.07		70.75	94.92	93.58	93.91		94.18	x	25.43	94.5	95.1	95.3	6.46	0.46	α 3	75	9.76			
verage P	No. 2, Worth- ington Engine.		07.81	97.69	19 90	10 66	99.52	100.73	101.66	106, 49	00 501	106.15	100.40	104.92		92.36	3. E.	93.55	93.66	:	81.18	88.16	£ 75	94.5	95.1	95.3	6.76	94.0	200		11.00	21.0	0.10	0.1.0
Ą	No. 1, Worth- ington Engine.			0 7						94.27		13.14 0 0 0 0		_	:			92.83		:		94.88												
lo səl	IN IstoT liM to renisM each ye	Miles.	3 x 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5	201.00	110.010	111 900	113.319	1 2	116.145	131,359		138.301	143.207	156.042	165.89	182.625	212 832	229.257	237.967	242.561	544.964	245.478	:	249.627	252,646	955 695	987.618	556 774	100 000	200.921	204.400	200, 955	272.833	280,013
ers in hyear.	uN latoT tall to lass seu		:	:	:	:		:					95T	256	335	897	1,347	1,479	1,544	1,535	1.600	1,580	1,500	1,553	1.553	2000	7,000	000,1	1,100	0000	1,830	1,044	2,045	2,331
ni sta	Total Varietion Varietion of Hois in equals.		:			K t	7.7	3 8	3,	100	707	130	140	152	176	174	222	556	230	288	300	800		230	930	086	000	000	250	523	241	741	24.)	250
Ser- at in ar.	o radmuN S asuoH S asiv T dosa S asiv		21 7	07.	9.00 9.00 9.00 9.00 9.00 9.00 9.00 9.00	2,189	1,001	1,014	2.55	(1.766)	(448)	2,087	2,344	2,936	3,315	3,055	32.23	2,191	2,111	1.200	526	393	357	3133	364	402	250	#17	060	1,033	1,319	1,102	2,036	3,185
e Ser- nse in ar.	Total Murs ni esch yes ni esch yes		5,769	3,512	XIC.	101.9	x,550,x	10000	14,062	16 076	012,01	18,363	20,707	23,643	26,893	29,883	34,056	36.192	38.250	39.401	39 997	40.326	40 683	10,951	10,001	11,010	000,14	200,24	43,242	44,275	45,607	48,529	50.847	54.012
tor ser	nuenoD of Wate taiqaD esoqruf	Gallons.	£3.25	65.03	41.74	54.79	59.70	06.40	71.01	1000	00.00	94.66	x6.x2	95.81	95.59	66.36	65 02	78.05	90.03	96 59	XX 95	9.00 50.00 50.00	05.74	41.00	01.00	99.1.0	20.75	12.66	94.61	95.77	88.57	93.60	99.20	92,75
	Populat Average	1		71,693					2,354		317,730	105,211	111,800	118,403	126,169	166,709	175,000	185,000	188,507	755													250,000	270.000
поізф	Average D Consum of Water		3,124,000	1,451,202	2,812,000	3,33,303	1,411,245	4,879,422	5,234,056	9,111,6	7,698,511	9,960,224	9 706 127	11 344 337	19,060,610	11,000,000	11 270 069	11,070,002	17,404,41	16,000,000	10,040,01	12,502,61	10,000,001	13,192,000	18,027,000	18,878,722	19,576,957	21,436,509	22,094,204	23,507,266	21,901,140	23,933,847	24,803,478	55 044 G81
	YEAR.		875	876	77%	1x7x	1879	1230	1331	1992	1883	772	22.2				:	1888	:	:	:	:	:	:	:		:	:					1904	1005

SCHEDULE No. 9.

Record of Gauging at Rosehill Reservoir for each Month of 1905.

1905. Month.	Elevation of Lowest Water Above Zero.	Elevation of Highest Water Above Zero.	Average Eleva- tion Above Zero,	Average Depth in Reservoir.	Average Contents in Imperial Gallons.
January	Ft. In. 209 7	Ft. In. 213 9	Ft. In. 211 9	Ft. In. 15 9	22,384,168
February	206 5	210 2	208 2	12 2	14,080,236
March	208 2	212	209 1	13 1	16,144,660
April	211 1	214 10	212	16	22,981,860
May	211 6	214 8	212 6	16 6	24,201,520
June	212 4	215 5	213 10	17 10	27,494,764
July	208 2	213 8	210 3	14 3	18,834,088
August	209 - 1	212 10	210 9	14 9	20,005,423
September	208 - 1	210 6	209 3	13 3	16,527,162
October	208 - 9	212 1	210 7	14 7	19,614,978
November	209 - 5	215 9	212 10	16 10	25,014,627
December	208 - 7	214 7 .	. 212 6	16 6	24,201,520
Averages			211 1	15 1	20,957,083

Note.—The average depth of water in the Reservoir for the year was 15 ft. 1 in. equal to an elevation of 211 ft. 1 in. above zero.

## SCHEDULE No. 10. STATEMENT OF MAINS LAID DURING THE YEAR 1905.

Street, Avenue, Etc.	Side of Street.	Location	Length in Feet.
36-in. Main:			
Bathurst St	West	From 459 ft. n. of College St. to 10 ft. n. of	
		Dupont St	5.865
Dupont St		Bathurst St. to Davenport Rd	3,290
Davenport Rd	West,	" Dupont St. to Poplar Plains Rd	127 962
Poplar Plains Rd	West	Dupont Bu to Cottingnam bu	574
Cottingham St Rathnally Ave		" Cottingham St. to Cottingham (jog)	104
Cottingham St			702
Avenue Rd	East		122
Cottingham St		9	646
Cottingham Pk			205
Birch Ave	South	" West end east to Yonge St	
Yonge St	. West	" Birch Ave. to Shaftesbury Ave	
Shaftesbury Ave			
Ottawa St			
Summerhill Ave		Ottawa Bt. to belle to reservoir	
Reservoir Grounds High Level Station		Bulling III. to toe or stope	
7)	·	Total	16,445
24-IN. MAINS:	Month	16 ft e of Church St to Cherry St	4,397
Change St	Wast	" 16 ft. e. of Church St. to Cherry St " Front St. to Worts Ave	335
Eastern Ave Par	k	Across Park to s.e. cor. of Sumach St	322
Sumach St	. East	. From Eastern Ave, to 32 ft. n. of Queen St	1,026
Rosehill Reservoi	r'	Connection between 36 in, and 24 in, main	s 50
16-in. Main:		Total	. 6,130
Oueen St. east	North	. From Sumach St. to Don Esplanade, 77 ft	
•		y of Bridge	1 - 1.107
Queen St. east	. North	" 75 ft. e. of Don. Bridge to 24 ft. e. o	f
		Broadview Ave	. 1,141
		Total	. 2,248
12-IN. SUB-MAINS: Bloor St	South	Across Bathurst St. By-pass on 26-in, mai	n 50
Front St. east		Front St., between 24-in. and 12-in	26
		mains w. side of Cherry St West, from Station to Poplar Plains Rd.	230
Grounds Poplar Plains Rd	East	. From Cottingham St. to St. Clair Ave	2,834
Queen St. east	North	. Across Sumach St to 24-in, main From 598 ft. w. of Poplar Plains Rd.	25
		185 ft. e. of Oriole Rd	1.1 - 1.941
Spadina Ave	East	30 in. main on Wellington Ave.	4,822
Sterling Rd	. East	" 272 ft. n of Dundas St., 900 ft n.	900

## ${\mbox{SCHEDULE No. 10}--Continued.}$ ${\mbox{S}_{\mbox{TATEMENT}}}$ of Mains Laid During the Year 1905.

Street Avenue Eff	le of reet.	Location.	Length in Feet.
8-in, Sup Mans: Avenue Rd Wes	t From	265 ft. n. of Balmoral Ave. to south side of Heath St	1,3531
Alhambra Ave Wes Avenue Rd Wes	Colleg City.) h From " t" (The Colleg City.)	210 ft. e. of Ontario St., 160 ft. east Boustead Ave., 500 feet north s. side Heath St. to n. side Clinton St. is main was laid by Upper Canada ge in 1891 and taken over by the	160 552 850
Balmoral Ave Sout	h ' '	324 ft. e. of Broadview Ave., 158\(^3\) ft. east	$158\frac{3}{4}$
Balsam St. Nort  Bartlett Ave Wes Barton Ave. Nort Barton Ave. Nort Barton Ave. Nort Barton Est. Wes	t	Spadina Ave., 120 ft. e. to old 4-in.  main	$140 \\ 264\frac{1}{4} \\ 19 \\ 116\frac{1}{2} \\ 215\frac{1}{2} $
Bellefair Ave. Wes Bernard Ave. Nort Bernard Ave. Sout Binscarth Rd. Sout Clarendon Ave. Sout Clinton St. Wes Clinton St. Wes	h " h " h " t "	of Arthur St. Queen St., 197½ ft. north	$196\frac{1}{2}$ $210$ $391$ $159$ $255$ $641$ $126$ $436$
Conduit St Nort Crawford St Wes Davenport Pl Nort Dearbourne Ave Nort Dickens Ave Nort Don Impr'm't Rd Eastern Ave Nort	t " t " th " th " th " th "	Dundas St., 706 ft. w. 603 ft. n. of Bloor St., 407 ft. n. 480 ft. e. of Davenport Rd., 50 ft. e. 617 ft. e. of Broadview Ave., 125 ft. e. Logan Ave., 258½ ft. e. Queen St., 257½ ft. s. Leslie St. to Laing St	$753\frac{1}{2}$ $407$ $50$ $125$ $301$ $305$ $770\frac{1}{2}$
Emerson Ave Wes Wes Ernest Ave Nort Essex St. Sout Farnham Ave Nort Forest Hill Rd Wes Galley Ave Nort	t " sh " sh " t	268 ft. n. of Bloor St., 551½ ft. n. Wallace Ave., 470 ft. n. Perth Ave., 388 ft. w. 605 ft. w. of Christie St. to 88 ft e. of Shaw St. Avenue Rd., 627 ft. e. At St. Clair Ave. (connection) 894½ ft. w. of Sorauren Ave. to 244 ft. e. of Roncesvalles Ave.	$551\frac{1}{4}87$ $408\frac{1}{4}$ $639\frac{1}{2}$ $656$ $32$

# SCHEDULE No. 10.—Continued. STATEMENT OF MAINS LAID DURING THE YEAR 1905.

Street, Avenue, etc.	Side of Street	Loca <b>t</b> ion.	Length in Feet.
Garnett Ave	North 1	From 675 ft. w. of Christie to 103 ft. e. of	F 11 = 1
		Shaw St	565 <u>1</u>
Gladstone Ave	West	" 151 ft. s. of Lindsey Ave., 72 ft. s	72
	West	" Bloor St., 929 ft. s	917
Gore St	South	" Clinton St., 285 ft. w	$334\frac{1}{2}$
Core Vale Ave	West	212 It. S. Of Althor, Dt. 010 It. 5	1,003
Grace St	West	4.51 It. II. Of College Edit, 3000 Isl	371
Hallam St	North	Treston five. to Determine in the first	1073
** ******	North	"Shaw St., 90 ft. w. to old pipe" Danforth Ave. 329 ft. south	346
Hampton Ave	West	Daniol in 13 ton, 526 to 55 control to	22.5
Harcourt Ave	North	Tape Ave to Callaw Ave	
Havelock St	West	<ul> <li>293 ft. n. of College St., 114 ft. n</li> <li>253 ft. n. of Dewson St., 391½ ft. n</li> </ul>	
44 44	West	" Hepbourne St., 73 ft. s	
	West	130 ft. n. of Dale Ave., 636 ft. n	640
Hawthorne Ave .	Nest	" Avenue Rd. to 185 ft. e. of Oriole Rd.	6851
Heath St	North	" Dovercourt Rd. to 222 ft. e. of Rus	
Hepbourne St	. North	holme Rd	
46 66	North	140 ft. w. of Concord Ave., 100 ft. w.	
Herbert Ave		" Queen St. 198½ ft. n	. 213
Herbert Ave	North	Across Poplar Plains Rd. (connection)	. 53
Humboldt Ave Indian Rd	Eact	From High Park Ave., 255 ft. s	. 270
Jones Ave	West	" 608 ft. n. of Queen 252 ft. n	
Kendal Ave	West	219 ft, s. of Bernard Ave. to 208 ft	
Kendai Ave		s. of Wells St	
Kew Beach	. North	" Waverley Rd., 540 ft. w	. 593
Kingston Rd		" Queen St., 253\(\frac{3}{4}\) ft. n	
Kintyre Ave		" Broadview Ave. to Grant St	. 405
Lamport Ave	1	" Extension e	. 74
Leuty Ave		" 112 ft. n. of Violet Ave. n. to Quee	n 689
Liszt Ave		" across Poplar Plains R. (connection	
Maple Ave	South	" 23 ft. e. Powell Ave., 121 ft. e	
Melville Ave	North		
Mincing Lane	East	Wellington St., 222 ft. n. to 4 in. m'	
Morley Ave	West	Queen St. to Eastern Ave	
Morrow Ave	South	. " Dundas St., 244½ ft. e	
Natalie St	South	" Booth Ave., 1983 It. W	$\frac{153\frac{1}{2}}{666}$
Olive Ave	North	" Avenue Rd., 628 II. e	
Oriole Rd	West	Tienti Dt., 190 It. St	
**	West	At St. Clair Ave. (connection)	
Preston Ave	East		
Salem Ave	West		2153
"	West	. Italian St., 1013 to St	
Schiller Ave	North	. I of the Little Little 2	
Seaton Sq	North	. Lamer Bron 11, or, org 11, or 11, or	
"	N. d' E .	. I willier ston II ve., oo It to I bog It.	1 4
Shaw St	West		
	West		
** *******	West		1,056
	11 Cou		1

## SCHEDULE No. 10.—Continued. STATEMENT OF MAINS LAID DURING THE YEAR 1905.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
Shaw St	West	From Hallam St. to Shaw Pl	265
Ollaw Free Control		" Shaw Pl., 138 ft. n	156
**	West	" Hallam St., 131 ft. s	182
Shaw Pl	North	" Shaw St., 449 ft w	467
Sheridan Ave	West	" 250 ft. s. of Dundas St., 50 ft. s	50
Sparkhall Ave	North	"Broadview Ave., 343 ft. e	3961
Springhurst Ave		" 400 ft. s. King St., 77 ft., s	77
Sterling Rd	West	" Dundas St. to a point 635 ft. n. taken	
Sterning Ind	west	over with street, laid by Leak &Co.	
	West	" Extension from 635 ft. n. of Dundas	
	West	St., 177 ft. n	177
	Agnora	connection between 6 in. and 12 in.	111
**	Across	mains 270 ft. n. of Dundas St	33
Our in which the	West	" 285 ft, s, of Bloor, 216 ft, s	216
Symington Ave	West	200 ft. 3, 01 Dioot, 210 ft. 3	180
		" 917 ft. s. of Royce Ave., 180 ft. s	100
St. And'w's Col M'in:		G Clay Pd C00 ft w	649
Pelham Pl		Gren Ma., 600 It. W	325
Binscarth Rd		Temam 11. to Benomed Ave	558
Schofield Ave		Imiscatiff ad. to ragar reve	156
Edgar Ave		Denoment Ave. to madicinian reve ::	720
Maclennan Ave		Ingal Ave. to this of the survey	
St. Clarens Ave		171001 15th, 52.55 1th HOLLI	3811
	West	310 1t. 11. 01 Wallidge Ave., 242 1t. 11.	242
Wallace Ave		Oampbett Ave., 2443 10, Cast	2893
		1.00 ft. W. Of Ballsdowne Ave., 29 ft. W.	25
Waverley Rd	East	extension south to New Deach	33
Wells St	North	Didnswick ave. to Rendan Ave	375
West Ave	West	2042 It. II. 01 DOUBLE AVE. to 550 It. 5.	
717: 1	G 41	of West Ave	533
Winchester St		Diffilacti 19t., 940g It, cast	589
Withrow Ave	North	1 ape 11 vc., 111 tt. west	427
Wolfrey Ave	North	405 ft. W. of Logan Ave., 2005 ft. W.	230
Yarmouth Rd	North	" Shaw St., 330 ft. east	377
		Total	36,512
		From Roxboro' Ave. to Chestnut Park Rd.	295
Ave.w. of m'n Rd		" Kippendavie Ave 224 ft. west	245
Buller Ave		implemente inver, 221 in meetitiin	108
Collier St	11111000	" 367½ ft. e. of Park Rd., 108 ft. east	100
			648

SCHEDULE No. 10 -Continued.

MAINS TAKEN UP OR ABANDONED.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
30-1n Main: Bathurst St	West	From 24-in, brauch on College St. to 12 ft.	ŏ0
12-In Sub-Mains : Poplar Plains Rd.	West	Davenport Rd. to creek at High	717
6 In Sub-Mains: Queen St. east	South	" a point 75 ft. e. of Don Bridge to Davies Ave	98
Sterling Rd	West		422
Palmerston Ave	. West	" 715 ft. n. of Bloor St. to 915 ft. n. of Bloor (through the Square)	200
		Total	720

Mains throughout the City of all Sizes and Descriptions, including those on Streets, Government, Private or other Property, at the end of the year 1905.

Size.	Total length in feet in use at end of 1901	Put in during 1905.	Taken out during 1905.	Total length in feet in use at the end of the year 1905.
36-inch main	$3,280$ $11,292$ $27,779$ $5,076$ $3,442\frac{1}{2}$ $253,414\frac{3}{4}$ $14,195$	$16,445\frac{1}{4}$ $6,130$ $2,248\frac{1}{2}$ $10,832\frac{1}{2}$	717	19,725 $11,242$ $33,909$ $5,076$ $5,691$ $263,530$ $14,195$ $8,628$
10-inch sub-mains. 8 inch " 6-inch " 4-inch " 3 inch " 2-inch and 1-inch service mains. Old 8-inch cast iron mains.	$\begin{array}{c} 7,275 \\ 1,042,893\frac{1}{2} \\ 48,165 \\ 10,586 \\ 5,943\frac{1}{2} \\ 6,085 \\ 1,240 \end{array}$	1,353\frac{1}{2} 36,512	720	$1,078,685\frac{1}{2}$ $48,813$ $10,586$ $5,943\frac{1}{2}$ $6,085$ $1,240$
and ormen comme	$1,440.667\frac{1}{4}$	$74,\!169_4^3$	1,187	1,513,350

Total length in use at end of year 1,513,350 feet or 286,619 miles.

SUMMARY OF VALVES ON STREETS AT END OF 1905.

Size and Description.	In use at end of 1904.	Put in during 1905.	Taken out dur- ing 1905.	Total in use at end of 1995.
STOP VALVES.				
36 inches	5	9		14
80	7			7
21	17	5		22
20	6	1		<u>7</u>
16	2	5		7
12	467	25		492
10 "	6			6
9	6		• • • • • •	6
8 "	12	2		14
6	1,820	73		1,893 88
1	84	4	•••••	30
3 "	29	1		507
Totals	2,461	125		2,586
CHECK VALVES.				
36 inches	5			5
30	4			4
24 "	1			1
20 "	1			1
12 "	12			12
6	47	1		48
Totals	70	1		71

## SCHEDULE No. 11.

STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1905.

Street, Avenue, etc.	Side of Street.	Location.
Alhambra Ave Argyle St Avenue Rd Balmoral Ave """ Bartlett Ave Beatrice St Bellefair Ave Berkeley St Buller Ave Clarendon Ave "" Conduit St "" Crawford St Davenport Pl Dickens Ave Don Improve't Rd. Elm St "" Emerson Ave Ernest Ave Essex St Farnham Ave "" Front St. East Garnett Ave Gibson Ave Givens St Gladstone Ave "" Gore St Gore Vale Ave "" Grange Ave Grange Ave Grange Ave General Hospital	West North East South " " " East North West " " North " North " East North " North " South " " " " " North " " " " North South " " " North South North " " " " " " " " " " " " " " " " " " "	418 feet north of Boustead Ave., 3 way. 150 feet west of Shaw Street, 3 way. Opp. south line of Edmund Street, 3 way. 10  feet west of Avenue Rd., 302½ "  13 feet east of Poplar Plains Rd. 402½ feet south of Hallam Street. 500 feet south of College Street. 194½ feet north of Queen Street. 475½ feet north of Wilton Ave., 3 way. 222 feet west of Kippendavie Ave. 110 feet south of Elm Street, 3 way. 99½ feet south of Elm Street, 3 way. 99½ feet west of Avenue Rd. 318 "  7½ feet north of Barton Ave., 3 way. 31½ feet west of Dundas Street, 3 way. 602 " 904 feet north of Bloor Street, 3 way. 530 feet west of Davenport Rd., 3 way. 255½ feet east of Logan Avenue, 3 way. 243½ feet south of Queen Street, 3 way. 155½ feet east of Teraulay Street, 3 way. 155½ feet west of Yonge Street, 3 way. 192 feet west of Perth Ave., 3 way. 257½ feet north of Bloor Street. 229 feet north of Wallace Avenue. 386 feet west of Shaw Street, 3 way. 392½ feet east of Shaw Street, 3 way. 291 feet east of Shaw Street, 3 way. 333½ feet east of Shaw Street, 3 way. 356 feet west of Yonge Street, 3 way. 356 feet west of Yonge Street, 3 way. 356 feet south of Argyle Street, 3 way. 356 feet west of Olinton Street. 37½ feet south of Argyle Street, 3 way. 365 feet west of Clinton Street. 375½ feet south of Arthur Street. 376 feet west of Clinton Street. 377 feet south of Arthur Street. 386 feet west of Clinton Street. 3795½ feet north of College Street. 1.098½ " 10 feet east of Spadina Ave., 3 way. In grounds.
Hackney St Hallam St Hampton Ave	North	82 feet west of Shaw Street.

### SCHEDULE No. 11-Continued.

### Hydrants Placed in Position During 1905.

Street, Avenue, Etc.	Side of Street.	Location.				
Harcourt Ave	North	292 feet west of Pape Ave.				
**	"	12½ feet east of Carlaw Ave.				
'Havelock St	West	260 feet north of Dewson Street.				
**	44	2663 " " "				
Hawthorne Ave		436 feet north of Dale Ave.				
**		747 " " . "				
Heath St	North	15 feet east of Avenue Rd.				
**		307 " " "				
Houleast 1.	XX7 .	160½ feet east of Oriole Rd.				
Herbert Ave	West	195½ feet north of Queen Street.				
Kendal Ava	West	252½ feet south of High Park Ave. 206 feet south of Wells Street.				
Kew Beach	North	9\frac{1}{2} feet west of Kenilworth Ave.				
Kingston Rd	East	240½ feet north of Queen Street.				
Leuty Ave	West	253 feet north of Violet Ave.				
A r		110 43 6 4 41 6 0				
Melville Ave	North	. 241 feet east of Shaw Street.				
Morley Ave	West	, $286\frac{1}{2}$ feet north of Eastern Ave.				
Morrow Ave	South	242 feet east of Dundas Street.				
McMaster Ave						
Natalie St	NT ()	106½ feet east of Booth Ave., 3 way.				
Olive Ave	North	$\frac{328\frac{7}{2}}{626}$ feet east of Avenue Rd., 3 way.				
Oriole Rd	Wout	256 feet south of Heath Street.				
Parliament St	"	Opp. Oak Street, 3 way.				
Phoebe St	South	10 feet east of Spadina Ave., 3 way.				
Poplar Plains Rd.	East	1308 feet north of Cottingham Street.				
64 66 66	44	1,2241 " " "				
** ** **		363 feet south of Clarendon Ave.				
	"	$117\frac{3}{4}$ feet north of Lizst Ave.				
T)		8½ feet south of St. Clair Ave.				
Freston Ave		173½ feet north of Hallam Street.				
54 45		7701				
Oneen Street	South	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				
	North	183 feet north of Shanley Rd.				
Salem Ave	West	183 feet north of Shanley Rd.				
THE THEORY AND THE TENE	1101011	1020 feet west of Lopial Liains Ito.				
Seaton, Sq. (west)	East	83 feet north of south side of Square.				
Seaton Street	4.6	356½ feet south of Carlton Street, 3 way				
Shaw Street	West	14 feet south of College Street, 3 way				
44 41		304 feet north of Bloor Street.				
		304 feet north of Bloor Street. 6543 " " " 1,007 " " " 2981 feet west of Shaw Street.				
Shaw Place	North	2081 feet west of Shaw Street				
Spadina Ave.	East.	163 feet south of King Street 3 way				
	64	163 feet south of King Street, 3 way. 164 feet north				

## SCHEDULE No. 11-Continued.

## Hydrants Placed in Position During 1905.

Street, Avenue, Etc.	Side of Street.	Location.
Spadina Ave	66	
66 66	West North East	103½ feet south of Cecil Street, 3 way. Opp. south line of Balsam Street, 3 way. 340 feet east of Broadview Ave. 280 feet north of Dundas Street, 3 way. 573¾ """" """"""""""""""""""""""""""""""""
" "	South	8733 " " " " " " 1,169½ " " " " " " " 16½ feet east of Spadina Ave., 3 way.
St. Clair Ave  """ """ """ St. Clarens Avenue St. Patrick Street. Trinity Street Wellesley Street	North  " " " " " " West North East	923 feet south of Thompson Ave., 3 way. 371 " " " " " 372 feet west of Poplar Plains. 3043 " " " " 874 feet east of Forest Hill Rd. 75 feet west of Avenue Rd. 2975 feet east " " 181 feet east of Oriole Rd. 3265 feet north of Bloor Street. 325 feet west of Hickory Street, 3 way. South-east corner of Front Street, 3 way. 2414 feet east of Campbell Ave. 189 feet east of Yonge Street, 3 way. 167 feet west of Church Street.
Wells Street Winchester Street " Withrow Ave	North South " North	111½ feet west of Kendal Ave. 207 feet east of Sumach Street, 3 way. 546½ "" 303¾ feet west of Pape Ave. 328 feet east of Shaw Street. 60 feet south of Albert Street, 3 way.
WAY HYDRANTS RE	PLACING 2-WA	y Already in Position.
Adelaide Street Alexander Street Beaconsfield Ave Bedford Rd Berkeley Street Berryman Street Bloor Street Bond Church Street Crawford Street Delaware Ave	West East West South	Opp. Grand Opera Houee. 15 feet east of Yonge Street. 618 feet north of Queen Street. 193 feet north of Bernard Ave. Opp. Fire Hall. 350 feet west of Davenport Rd. South-west corner of Yonge Street. 15 feet north of Queen Street. 18 feet south of Dundonald Ave. 9 feet north of Queen Street. 9 feet south of Bloor Street.
8E	ļ	

#### SCHEDULE No. 11-Continued.

### HYDRANTS PLACED IN POSITION DURING 1905.

Street, Avenue, etc.	Side of Street.	Location.
Dufferin Street  """  Dundas Street  D'Arcy Street  Gerrard Street  Givens Street  Machine Street  Madison Ave  Markham Street  Mitchell Ave  Morse Street  Michell Ave  Portland St  Princess St  Queen St  """  Reynolds Ave  Richmond St.  Robert St  Robinson St  Roxborough Ave  Russett Ave  Shaftesbury Ave  Shaftesbury Ave  Shaw St  Sherbourne St  Simcoe St  """  Spadina Ave  Spadina Pl  Sultan St  St. Clarens Ave  Tecumseth St  Vanauley St  Walker Ave  Waverley Rd  Yonge St	East  North-East. North  West  West  West  North  West  North  West  East  West  East  South  North  East  North  West  South  East  North  West  North  West  South  East  North  West  North  West  North  West  South  East  West  East  West  South  East  West  South  East  West   24 feet south of Dundas Street. 297 feet north of Bloor Street. 10 feet south "" 316 feet north-west of Sorauren Ave, 384 feet west of Beverley Street, 237½ feet east of DeGrassi Street. 162 feet north of Bruce Street. 84 feet north of Hepbourne Street. 84 feet north of Hepbourne Street. 84 feet east of Close Ave, North-east corner of Bloor Street. 24 feet east of Close Ave, North-west corner of Robinson Street. 194 feet west of Tecumseth Street. North-west corner of Eastern Ave, Opp. Stephanie Place. South-west corner of Sydenham St. 9 feet south of College Street North East corner of Farley Ave. 15 feet north of Esplanade. 601½ feet east of Lee Ave. 237 feet east of Lee Ave. 237 feet east of Parliament Street. North-east corner of Dalhousie Street. North-east corner of Ellis Ave. South-east corner of Vonge Street. North-east corner of Wanning Ave. 687¾ feet east of Avenue Rd. 615 feet north of Bloor St. North-east corner of Ottawa Street. 115 feet south of Bruce Street. 560 feet north of Carlton Street. 560 feet north of Carlton Street. Between Anderson and Caer Howell. North-west corner of Wellington Street. 50uth-west corner of Kellington Street.	
		Between George and Frederick Sts.

	SCHEDU	LE No. 11—Continued.	
Street, Avenue, Etc.	Side of Street.	Location.	
2-Way Hydrants Re	MOVED FROM	OFF THE STREETS.	
Spadina Ave Trinity St	East	70 feet north of McPherson Ave. South-east corner of Balsam Street. South east corner of Front Street. 60 feet south of Albert Street.	
	Semmai	RY OF HYDRANTS 1905.	
•		streets at end of 1904	3,113 93
		treets, one 3-way hydrant and four 2-way drants were replaced by 3-way hydrants	3,20
		on streets during 1905	3,143 13
3-way hydrants replac	ing those alre	eady on streets	3,27

#### SCHEDULE No. 12.

Total List of all Valves Placed in Position During the Year 1905, Showing the SIZE, LOCATION, ETC.

Street, Avenue, Etc.	Side of Street.	Location.
Birch Avenue Cottingham Street Cottingham Street Cottingham Street	West  " South North " South	North line of Bloor Street.  South "Dupont Street.  North "Dupont Street.  West "Yonge Street.  Opp. High Level Station, w. of Branch to Station.  on Branch to High Level Station.  East line of Bathurst Street.  At toe of South Slope.
24-INCH STOP VALVES: Front Street Front Street Rosehill Reservoir Sumach Sereet Sumach Street	North South East	" Parliament Street. Between 36-in. and 24-in. mains. South line of Queen Street East.
20-inch Stop Valves : High Level Station		Between 36-in. and 20-in. suction pipes.
16-INCH STOP VALVES: Queen Street e	Nouth	East line of Sumach Street. West side of Don Esplanade. East side of Don Esplanade Drive. West line of Broadview Avenue. East "
12-INCH STOP VALVES: Bloor Street Bloor Street Eastern Avenue Front Street (at	South	On west side """" 4 feet west of Bridge.
Cherry) High Level Statior King Street w. Poplar Plains Road Poplar Plains Road Poplar Plains Road Queen Street e	South l East "  North	On 12-in. discharge w. 19 feet west of east line of Spadina Avenue. North line of Cottingham Street. South "Edmund Street. " "St. Clair Avenue. West of 24-in. main (intersection).
Sherbourne Stree Spadina Avenue Spadina Avenue Spadina Avenue Spadina Avenue Spadina Avenue Spadina Avenue Spadina Avenue Spadina Avenue	East	North line of Wellington Avenue South "King Street. North "Adelaide Street. " Queen Street. North "

#### SCHEDULE No. 12-Continued.

Total List of all Valves Placed in Position During the Year 1905, Showing the Size, Location, Etc.

Street, Avenue, etc.	Side of Street.	Location,				
Spadina Avenue St. Clair Avenue St. Clair Avenue	East	South line of College Street. West "Poplar Plains Road.				
St. Clair Avenue St. Clair Avenue		West "Avenue Road.				
S-INCH STOP VALVES: Avenue Road Avenue Road	West	North line of St. Clair Avenue.				
Balmoral Avenue Balmoral Avenue Balsam Street Barton Avenue Bellefair Avenue Bernard Avenue Bernard Avenue Bernard Avenue Clarendon Avenue Clarendon Avenue Conduit Street Dickens Avenue	Sonth	North line of Boustead Avenue.  West "Avenue Road. East "Spadina Avenue. West "Manning Avenue. West "Manning Avenue. East "Bathurst Street. North "Queen Street. South side of 24-in. main (intersection). East line of Huron Street. East "Kendall Ave. West "Avenue Road. East "Poplar Plains Road. West "Dundas Street. East "Logan Avenue.				
Queen Street	Centre	South side of 16-in. main (intersection).				
Emerson Avenue Ernest Avenue Farnham Avenue Forest Hill Road Frederick Street	West	South line of Queen Street, North "Wallace Avenue. West "Perth Avenue. East "Avenue Road. North "St. Clair Avenue. South side of 24-in. main (intersection). West line of Vine Street				
George Street	East	South side of 24-in main (intersection).				
Hallam Street Hampton Avenue . Harcourt Avenue Heath Street Hephograe Street	West	South line of Bloor Street.  West "Clinton Street.  West "Preston Avenue.  West "Shaw Street.  South "Danford Avenue.  West "Pape Avenue.  East "Avenue Road.  Worth "Queen Street.  West "Poplar Plains Road.  South "High Park Avenue.  South of 24-in. main (intersection).  North line of Wells Street.				
Herbert Avenue Humboldt Avenue Indian Road Jarvis Street	West North East West	West "Poplar Plains Road. South "High Park Avenue, South of 24-in, main (intersection).				
Kew Beach	North	North line of Wells Street. West "Waverley Road. West side of 24-in. main. (intersection).				

#### SCHEDULE No. 12-Continued.

 $T_{\rm OTAL}$   $L_{\rm IST}$  of all Valves Placed in Position During the Year 1905, Showing the Size, Location, Eqc.

Street, Avenue, etc.	Side of Street.	Location.
Kintyre Avenue Leuty Avenue Lizst Avenue Mark Street Melville Avenue Mincing Lane Morley Avenue Morley Avenue Olive Avenue Oriole Road Oriole Road Parliament Street River Street Sclem Avenue	North	West line of Grant Street.  East "Broadview Avenue.  South "Queen Street.  West "Poplar Plains Road.  East "Defries Street (1904).  East "Shaw Street.  South side of Wellington Street (pressure valve.  South line of Queen Street.  North "Eastern Avenue.  North-east line of Dundas Street.  East line of Avenue Road (Balmoral).  South "Heath Street.  North "St. Clair Avenue.  South side of 24-in main (intersection).  ""  South side of 16-in, main (intersection).  South line of Hallam Street.
Sterning Road Sullivan Street St. Andrew's College Main:	South	West "Poplar Plains Road. South "College Street. North "Bloor Street. West "Shaw Street. East "Broadview Avenue. In front of Matthew Bros.' factory. 38 feet west of East line of Spadina Avenue. West line of Glen Road.
Schofield Place St. Clarens Avenue St. Patrick Street Trinity Street Wells Street West Market Street Winchester Street	West North West North West South North	North "Binscarth Road. "Bloor Street. 39 ft. west of East line of Spadina Avenue. South side of 24 in. main (intersection). West line of Kendal Avenue.
4-INCH STOP VALVES: Buller Avenue Chestnut Park Rd 1st branch west		West line of Kippendavie Avenue.
of Main Road	East	North "Roxboro Avenue. South "Chestnut Fark Road. North end, between 4-in. and 6-in. mains.
•		East end B.O. into sewer.
6-INCH CHECK VALVES: Sterling Road	West	In front of Matthew Bros.' factory, between 6-in and 12-in. mains.

SCHEDULE No. 13.

STATEMENT OF HOUSE SERVICES LAND DURING 1905.

				Size	of Serv	vices.			
Name of Street.	½-in.	5-in-	<u>3</u> -in.	1-in.	2-in.	3-in.	4-in.	6-in.	8-in.
Armstrong Ave.	8				1		1		
Avenue Rd	3	3	3	2	1	1		1	
Adelaide w	2					-			
Atlantic Ave				1					
Albany Ave	40	8			1				
Audley Ave	7								
Agues	7								
Argyle	1								
Alma Ave	2								
Atkin Ave	4	1							
Aberdeen Ave	6								
Alexander		1	1						
Alexander	2	1							
Austin Ave	_		. 1	1					
Admiral Rd							2		
Adelaide e		1			.,				
Arthur		1							
Albert					. 1				
Armour									
Alhambra Ave.									
Anderson		1							
Alice	. 11			i	1	2		1	
Bay		l l	• • • • • •		2				
Buchanan			1						
Bathurst	. 46	25	1	1		-	1		
Beaconsfi'd Ave	e, 1						- 1		
Brunswick Ave	. 3	6				1			
Berkeley	. 1	1					1		
Bank	6								
Broadview Ave	. 28		_						
Bernard Ave .		8		1					
Brooklyn Ave.	. 9								
Beaty Ave		2	1						
Bain Ave					• • • • •				
Beatrice				1					
Bloor w	0.1		1						
Bloor e		1					-	1	
Brock Ave	4.6		1	l	• • •   • • •			i	
Bolton Ave		· · · · ·						• • • • • • • •	
Birtle Ave							1		
Brighton Ave	* *	3					1		
Baldwin		2							
Baldwin Badgerow Ave		1							
Bismark Ave			2	1	1	1			

## STATEMENT OF HOUSE SERVICES LAID DURING 1905-Continued.

		Size of Services.							
Name of Street.	½ -in.	§-in.	³-in.	1-in.	2-in.	3-in.	4-in.	6-in.	8-in.
Bartlett Ave .	20		1	 					
Bishop	1		<b>.</b>						
Brant	2						. <b></b> .		. <b></b> .
Boultbee Ave	1								
Booth Ave	4				1				 
Bellfair Ave	1				1				
Bond					1				
Bean			1			l	}		
Borden	4		·				1		
Barton Ave	4	2							
Burnfield	9								
Belmont	3								
Birch Ave	i								i
Balmoral	•		14	2					
Bleecker		1	1	l <del>.</del>					
Boustead	6	1							1
Bellwood	18	8							
Bellevue Ave	4		1						
Buller	4	1							
Caroline	8	1				· · · · · ·			
Caronne Chestnut Pk. Rd.			5	4					
	46	5	.,	1 *			• • • • • •		
Crawford	18	4	]		4				
College	1	4		1		1			1
Chesley Ave	2								
Chestnut	4	2		1					1
Cottingham	3	ī	1	1					
Close Ave	1	1	1						
Coburg	$\frac{1}{2}$					1			
Curzon	31								
Concord	2								
Cherokee Ave			¦ · · · · ·			1			
Cumberland	4	1				í · · · · ·		j · · · · ·	
Coatsworth	1								
Carlaw	6					1			
Claremont	4	1							
Carroll	3						· · · · ·	· · · · ·	
'ypress					1				• • • •
Clarence Sq		1							
Campbell	7	1							
Clinton	6	1	• • • •						
Christie	6			• • • • •		1			
Chicora								1	
Collier	7							1	
Conduit	11			1					
Cluny		1	1	1	1		1	1	

## STATEMENT OF Hoose Services Laid During 1905—Continued.

Name of Stores		Size of Services.							
Name of Street.	½-in.	5 1.	3 1	1 .					
10.0	₹-111.	§-in.	$\frac{3}{4}$ -in.	1-in.	2-in.	3-in.	4-in.	6-in.	8-in.
Chatham Ave	1								
Carlton	1		1						
Centre Ave	1			1					
Cherry	1								
Cummings	$^2$								
CastleFrank Cr't			1						
Crescent Rd		. <b>.</b>	1						
Cowan Ave									
Clarendon Ave .			5		_				• • • •
Dovercourt Rd .	45	16	1						
Don Esp			'		1	1			
DeGrassi	8				-	_		1	
		2		1					
Dundas	37	ĺ		2	2				
Dagmar Ave	17	_							
Davenport Rd	15					<i>.</i>			
Dufferin	28	3	1	. 1					
Dupont	29	9							
Delaware Ave	18	12							
Dundonald		7	-2						
Dunn Ave		3						1	
Davies Ave	1								
Danforth	2				2			1	
Dresden Ave	7		1						
Delaney Cres't .	4				1				
Dalhousie	î					1			
Dowling Ave			1						
Dickens			1				1	1	
	3						1		• • • •
D'Arcy	3								
Denison Sq $\dots$	ن				******				
Dunbar Rd					2				
Dale Ave		1							
Dearbourne Ave	1							1	]
Duke	1								
Davenport $\operatorname{Pl}\dots$	3								
Dawson Ave		-2							
Defoe	$^{!}$								
Exhibition Gr	1			1					
Euclid Ave	24	4							
Eastern Ave	25		2	1			1		
Elm Ave	2.0		2	2	1				1
Essex	8		_		1				
	1								
Englewood Ave.	2	1							
Elm		1							
Elliott	1 9								
Elizabeth	2	1	1	1	1	1	1	1	1

## STATEMENT OF HOUSE SERVICES LAID DURING 1905-Continued.

				Size	of Serv	rices.			
Name of Street.			f						ĺ
	$\frac{1}{2}$ -in.	ş-in.	3-in.	1-in.	2-in.	3-in.	4-in.	6-in.	8-i n.
Emerson ave	30								
Ernest Ave					1		1		<b></b>
Esplanade e	1								
Edward	9								
Front e						1			
Francis					1				
First Ave.	12								
Frederick				1					
				1				4	i
Front w								_	_
Fern Ave	5	2		1					
Fermanagh	9			1					
Farnham		4 9	15	_					
Fuller	1	2							
Fenning	2								
Fraser Ave							1		
Follis	1	1							
Farley Ave	$^2$								
Gladstone	19	5							
Gore Vale Ave .	24								
Gerrard w		1			1		1	1	
Galley Ave	6								
Greenwood	4			2					
Grant	18	1			1				
Grace	42	6			1				
Galt Ave	- <del></del>								
	6					1			
Golden Ave	1								
Grenville									
Gerrard e	9	3							
Gordon Ave				I					• • • •
Givens	15		1						
Glen Rd				1					
Gibson Ave									
Gildersleeve	- 6						<b></b> .		
Garden Ave		1							
Gould					1				
George		1							
Garnet Ave	9			l					<b>.</b> .
Gore Ave									
Grange Ave				1					
				î		1			
Hallam Ave	26								ĺ
Huxley	- 67								
Harrison	ī								
			3						
Huntley Harbord			1						
	<u></u>		1 1						1

## STATEMENT OF HOUSE SERVICES LAID DURING 1905—Continued.

				Size	of Serv	ices.		
Name of Street.	$\frac{1}{2}$ -in.	<u>5</u> -in.	3-in.	1-in.	2-in.	3-in.	4-in. 6-in.	8-in.
Howie Ave	13							
Hogarth Ave	8							
Howland Ave	8	14	1					
Havelock	11	4						
Hamburg	7	1					1	
Huron	2	11	2	2			1	
Harvard Ave		1	j			1		
Hanlan's Pt	1							
Hayden	2						1	1
Herbert	4		()				1	
Heath		1	-					
Howard Howland Rd	4	i					1	
Hamilton	ō						11.	
Hepbourne		4						
Harcourt Ave		i		1				
Heward	5							
Henderson Ave.	1							
Hazelton Ave.		1						
Hampton	12							
Hastings Ave	. 1							
Ivy Ave	1							
Irwin Ave	. 1							• •   • • • •
Indian Rd	. 1							•••
Jones Ave	$\cdot \mid 20$	1	1			1		•   • • • • • •
Jameson Ave .				1		1		
Jefferson Ave .	2				2			
Jarvis			. 2	1	_			
Kenilworth Av	e 9	1	1	1				
KippendavieAv	. 9	1	5	2	1	1	3	
King St. w		18	3				1	1
Kendal Ave		10	,,					1
Kew Beach								
King St. e								
Kintyre	1	3						
Langley Ave	0.4			1				
Logan Lee Ave								
Leslie		1			,			
Lake Shore Av					. <b></b>			
Lindsay Ave.								
Lakeview Ave.		1						
Lansdowne Av						.		
Louisa		1						
Leuty Ave								
	Į.			l.		1	( )	

## STATEMENT OF HOUSE SERVICES LAID DURING 1905-Continued.

### Size of Services.

Name of Street.									
Million Milecon			2 .						
_	₫-m.	ş-in.	₹-in.	1-in.	2-in.	3-in.	4-in.	6-in.	8-in.
7						1			
Leonard Ave	1		i 			ĺ l			 
Liberty				1					
Lamport Ave			2						
Lowther Ave	1		$\frac{1}{2}$						
Lewis		i	l <del>.</del>						
Lombard					i	1			
Lake			1						
Lappin Ave	3								
London	ĭ								
Laing	î								
Markham	30	12							
Maynard		1 1	1						
Melville Ave	30	1						1	
Macdonell Ave.	5	3							
Marion	5	"							
Marion Ave	24		1						
_	5	10	i						
Macpherson Av.	6	10	1						
Major		1	2	1					
Maple Ave	2		_						
Massey						1			
Muir	10								
Mutual	1	1	• • • • • •						
Munro	9								
Margueretta	19								
Montrose	23	4				1			
Murray	2								
Metcalf		1							
Melinda						1	2		
Maitland			1			1			
Morse	10								
Marlboro Ave	1		1						
Millicent	9								
Maynard Ave			1						
Morley Ave	12					1		,	
Madison Ave		2		1					
Moutray	4								\
M'n Pump'g Sta.					1				<u> </u>
Mansfield			1		1 .				
Mincing Lane				ļ	1				
Maud Ave	1								
McMaster Ave	2	8		1					
McKenzie Cres	4				1				
McMillan	4						1		
McLean's Lane.	1								
McCaul	2								
	1	1	I	l	J	1		I	

## STATEMENT OF HOUSE SERVICES LAID DURING 1905—Continued.

N f Situach				Size	of Serv	ices.			
Name of Street.	<u>‡</u> -in.	ξ-in.	3-in. ∣	1-in.	2-in.	3-in.	4-in-	6-in.	8-in.
Morrow Ave				1					
Natalie Ave	6							1	
		4	6	1					
				-					
North			1						
Ossington Ave.			*						
Ontario	- i							i	
Olive Ave	$\frac{2}{2}$		• • • • • • •					<i>.</i>	
O'Hara Ave							1		
Oriole Rd									
O'Connell Ave	1		4						
	1								
Princess	_						2	1	
Piper	$\frac{\dots}{20}$	4	23					1	
Palmerston Ave	6	-+	4						
Perth Ave	5								
Preston Ave	6	$\frac{\dots}{2}$							
Pearson Ave		5							
Pembroke			2						
Pape Ave	30								
Price				2					
Pears Ave	8								
Paton Rd	1								
Park View Ave.	4	1							
Pacific							1	2	
Park Rd		2	1	1					
Prince Arthur A.			1						
Parliament	8			1	1				
Poulette	$\overline{2}$								
Pine Hill Rd		2							
Powell	2								
Pearl					1				
Peel	1								
Parkman	2								
Poplar Pl'ns Rd.	1		7						
Queen e:	22			1			$\frac{1}{1}$		
Queen w	11								
Queen's Park					1		<b></b>		
River	16		1	1					
Rusholme Rd	17	14	5						
Rathnally Ave			1						
Roxboro	4	19	5	3	1				
Roncesvalles Av.	1								
Russett Ave	2								
Richmond	1			1					
	13								1

## STATEMENT OF HOUSE SERVICES LAID DURING 1905-Continued.

Name of Street.				Size	of Serv	ices.			
Traine Vistarce.	$\frac{1}{2}$ -in.	<del>§</del> -in.	3-in.	1-in.	2-in.	3-in.	4-in.	6-in.	8-in.
Robinson	2				<b></b>		 		   
Royce Ave	ī								
Robert	1	2							
Ritchie									
Ryerson Ave	5	,							
Springhurst Av.		2	1						
Sterling Rd								$\frac{1}{2}$	
Smith	10	2						_	
Spadina Ave	1			2	1		1	3	
st. Clarens Ave.	36				,				
Shaw	59	6	1	1				1	
Sultan	0				1				
Shanley	4				l <del>.</del>				
Sherbourne			3	1					
Shirley	1								
St. George		8	2	7	4				
St. Helen's Ave.	11		. 1	i					
Symington	16						•••		
Sylvan	1	1							
Spadina Rd		9	6				1		
Sorauren		4		1					
Schiller Ave				1	i				
Salem	$\frac{1}{29}$								
Simpson Ave	7	3							
Simcoe	í		1				••••	1	
Sydenham	1							1	
Sussex Ave	1								
St. Paul	_	1							
South Drive		1	5			• • • •			
St. Andrew's	1								
Shudell	4								
Sumach	3		1						• • • •
St. Patrick			1						
Shaftesbury Ave	1					· · · · · ·			
Sparkhall Ave				2	· • • • • •				
Summerhill Ave	6					· · · · · ·			
St. Vincent	$\frac{4}{2}$	1							
1 11	$\frac{2}{2}$						1		
Sully Crest Seaton Sq					• • • • • •				
	10	l							
Sheridan St. Clair	3								
Spruce	4			1	1				
Strachan Ave	2								· · · · •
St. Louish	1						· · · · · ·		
St. Joseph Spadina Pl	$\frac{4}{1}$								

## STATEMENT OF HOUSE SERVICES LAID DURING 1905—Continued.

				Size	of Serv	ices.		
Name of Street.	¹a-in.	₹-in.	$\frac{3}{4}$ -10.	1-in.	2-in.	3-in.	4-in.	6-in.   8-in.
Sheppard								1
Prinity				1				
Friller	4							
l'iverton	14							
Thorne	1							
Femperance								1
Ulster								
University Ave.				1				
Victor Ave	20	2						
Van Horne	7							
Violet Ave	1							
Vermont	6							
Verrall	4							
Wilson Ave		1						
Wellington w				2			2	8
Woolfrey	19	1						
Woodbine Ave	3	1						
Wright Ave	13	1						
Wells	2	8						
Wellesley	17	9						
Waverley	5	1			. 1	1		
West Lodge	-			1			1	
West Ave	-	1 1		1		1		
Withrow		i	1					
Wallace Ave		1						
William Ave								
Walmer Rd	1	9	3					
Westmoreland.								
Walker	_	6		1				
West Marion.	1	1 5						
Wickson	4	,						
Winchester					. 1			
		3	1	1				
Woodlawn			1					
Water				1				
Woolsley		1						
Wellington Pl.		1			1		1	
Yonge		_		1			-	
York			1	1		i		
Yorkville Ave.	-							
Yarmouth	. 2							

			SCHE	DULE No.	14.		
STATI	EMEST OF H	OUSE	SERVIO	es in Use	то 31ѕт	DECEMBER, 1905.	
Taral numb	er of service	s in n	se brev	ious to 1874			1.375
100000	**						552
Number of	new	201100	.,				842
**		vices	laid du			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	24
**	new	6.6	* *				141
* *	renewed		6.6	-	-		12
+ 4	new	· · 1	aid by				602
6.6	renewed	6.6			1876		258
	new		6 6	4.4	1877		1,006
b b	renewed	5.6		4.6	1877		161
* *	new	4.4	4.6	Corporation	1878		2,189
4.6	renewed				1878		103
h k	new			4.4	$1879 \dots$		1,861
4.4	renewed		4.4	6.6	1879		97
6.6	new ,		6.6		1880		1,014
	renewed	**	6.6	* 6	1880		41
6.6	new		4.6	4.6	1881		2,654
+ £	renewed	6.6		6.6	1881		117
* *	new				$1882\ldots$		1,826
6.6	renewed		4.4		1882		44
4.4	new	4.4		**	1883		1,766
	renewed	6.6	6.6		1883		54
* *	new	6.6			1884 .		2,087
	renewed				1884		12
6.6	new		4.6		1885		2,344
4.6	renewed				1885		22
6.6	new	4.4	4.4	6.6	1886		2,936
4.6	renewed			4.4	1886		19
4.6	new		44		1887		3,250
6.6	renewed	4.4	**	. 6	1887		65
6.6	new	6.6	6.6		1888		2,990
6.6	renewed				1888		65
6.6	new	6.6		4.4	1889		3,288
4.4	renewed						68
5.6	new		• 6	*6	1890		2,136
4.4	renewed	4.6		**			55
	new		6.6				2,058
	renewed	4.6	44				53
4.4	new	6.6					1,151
* *	renewed	6.6		**			49
4.4	new	6.6	4.4		1893		526

" renewed " "

Kumber of	new s	services	laid by	Corporation	1894	390
	renewed	5.6	4.6	+ 4	1894	11
4.6	new		6.6		1895	319
	renewed	5.0		+ 6	1895	38
	new	6.6	4.		1896	291
* *	renewed	**	* *	6.6	1896	45
* *	new				1897	474
	renewed	4.4	6.6		1897	29
**	new				1898	50-
+ 6	renewed	4.4	4.4		1898	39
" "	new	6.6	6.6	* *	1899	664
**	renewed	6.6	* *	**	1899	35
6.6	new	6.6	* *	* *	1900	683
6.6	renewed	* *	* *	**	1900	20
4.4	new	4.6	5.5		1901	1,133
4.4	renewed			6.6	1901	΄ ε
6.6	new	* *	6.6	* 6	1902	1,319
4.6	renewed	* *	6.6		1902	13
4.	new	6.6			1903	1,402
**	renewed	4.6	4.5	4.4	1903	45
* *	new	* *	6.6		1904	2,03€
	renewed				1904	48
6.6	new	* *			1905	3,185
**	renewed	6.6	6.6	6.6	1905	20
ew service	es in York	ville at	time of	annexation		448
6.6	" Park	dale 1	6.4	**		885
atal numb	or of corri	and Inid	L. L.	1		

54,032

Total number of services.....

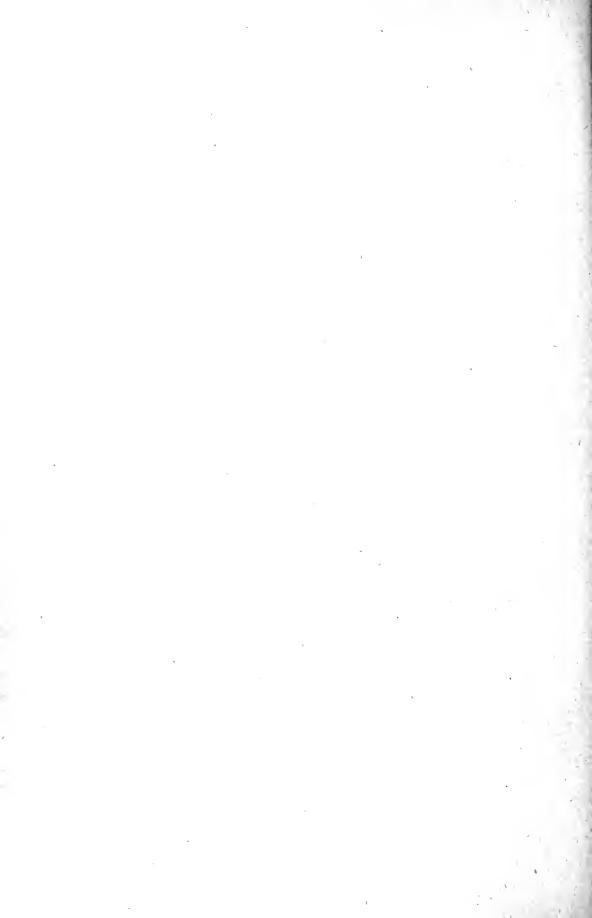
SCHEDULE No. 15-Number and Size of Services in Use to December 31st, 1905

		‡-in.	κα-in.	3-in.	s-in.	3-in.	1.in. 1½-in.	11-in.	2-in.	2½.in.	3-in.	t-in	6 in.	z.ii.	Total.
Services haid previous to 1875	evious to 1875	:							:		:	:			1,927
New services laid in 1875	iid in 1875	:		617	194	X.	2	-	7.3	:	_	:		:	99%
:	1876			006	7	11	X	_	7	-	X	:		:	1,013
**		:	:	1,083	#3	5.	T.	:	10		1			:	1,167
;	T77	· z	1,427	717	21 21	Ž.	σ.		10	:	1 +	-		:	2,292
:	1873	:	-,	633	<u>-</u>	2:	1.0		7	:	1.2				X(10) T
: ,,			0.07	385	56	[~	30		X		5.1				1,055
	122	:	1,375	1,275	3	17	17	:	2	:	17	1			2,771
**	12221	:	625	1,139	<del>†</del> <del>†</del>	23	20	:	100		11				1,870
**	-283	:	373	1,311	202	16	133	:	17	2		372	:		1,820
** 33		:	141	1,519	55	13	25		φ.	:	20	21	:		2,099
33	1885	:	130	2,068	56	26	133		7		10			:	2,366
11	1386	:	14	2,741	31	37	?; ?;	:	φ.	6	25		£		2,955
:	1887	:	10	3,062	106	55		:	1.5	15	25		7		3,315
.,	1888	:	:	2,856	101	35	52	:	15	61	14	7	77	:	3,055
"	1889	:		3,087	127	55		:	19	61	_	1.2	1	:	3,356
**	1890	:	:	1,995	83	37		35	16	16	:	2.4	1	:	2,191
"	1891		:	1,995	30	54		:	•11	:	:	13	7	:	2,111
,	1892	:	:	1,109	56	123	23	:	[~		:	12		:	1,200
"	1893	:	:	465	3	13			X	:	:	L	_	:	528
**	1894	:	:	332	53	15	17	:	30	:	:	+	-	:	401
77	1895	:	:	270	96	25	17	:	11	:	:	7	1	:	357
,,	1896	:	:	359	20	55	50	:	13	13		-	Т	:	336
:	1897	:	:	300	3.4	17	36		91.	:		23	5	:	503
"	1898	:	:	378	09	45	27	:	12	12	_	9	1	:	536
**	1899	:	:	430	123	70		:	26	:	_	1.7	11	:	669
;	1900	:		421	137	43	53	:	17	:		9	9	:	685
"	1901	:		654	202	65		:	54		:	16	9		1,033
3	1902	:	:	1,019	128	47	97	:	36	:		Ϊ́	10	:	1,332
,,	1903	:	:	1,101	113	83	7	:	37	•	[~	15	~		1,402
,,	1904	:	:	1,560	231	80	∞ →	:	50	:	12	37	15	က	2,036
;	1905	:	:	1,722	354	138	58	:	င်း	:	2	20	58	-	3,185
Totals	Totals	98	1	6,310 37,585	2,763	1,158	784	5	459	1	234	239	107	10	52,417
Totalr	I no services of I	pland													986
Laid b	Laid by Yorkville previous to annexation	annexa	tion												448
1 =	Parkdale "	3	: :												885

SCHEDULE No. 16.

Meters Taken off for Repairs and Replaced for 1905.

	1	1		1	1	-			
	§·inch.	- inch.	I-ineh.	14-inch.	2-inch.	3-inch.	4-inch.	6-inch.	
Crown.,	80	30	10		4	4	6		134
Nash	9	8	2						19
$Worthington \dots.$	6	13	15	2	6	2			44
Trident	2		2	7	· · · · · ·				11
Siemens	1	1	*;	10	2	1		1	19
Standard			1						1
Keystone		3	1						4
Gem					7		1		8
Crest							1		1
Hersey	ā	:3							8
Union					2				2
Empire		1							1
Kennedy						1			1
Totals	103	59	34	19	21	8	8	1	253



SCHEDULE No. 17.

Number of Meters in Use at Close of Year 1905.

Month.	₹-inch.	3 inch.	1-inch.	13-inch.	2-inch.	3-inch.	tinch.	5-inch.	6-inch.	8 inch.	10 inch.	
Crown	587	278	100		67	อีอั.	ăă		5,			1,147
Worthington	11	57	139	31	121	10	5					437
Siemens	62	69	48		49	28	21	11	10	2	1	301
Keystone	24	25	19									68
Hersey	37	18	10									6.5
Union	'				18							18
Nash,	45	30	38		6							119
Trident	47	42	17									106
Gem		,			64	17	7		5		1	94
Crest						9	6					15
Kennedy					5	10	8		17	2		42
Empire			2	2								4
Buffalo			1									1
Totals	846	519.	374	33	330	159	102	11	37	-4	2	2,417

SCHEDULE No. 18.

Size and Number of New Meters Placed During 1905.

	$\left  \frac{\frac{3}{8}}{\frac{3}{8}}$ -inch.	$\frac{3}{4}$ -inch.	1-inch.	$1\frac{1}{2}$ -inch.	2-inch.	3-inch.	4 inch.	6-inch.	
Crown	43	18	10		8	11	9	4	103
Kevstone	16	13	6				<i></i>		35
Trident	13	14	7						34
Gem	<b></b>	<b></b> .		• • • • • •	20	10	4	3	37
Hersey	9	5	l		1				16
Worthington	8	2	9	5	14	1			39
Nash	5	4	4						13
Siemens		ı	1				1		3
Union					9				9
Crest						5			5
Kennedy								2	2
	$-{94}$	57	38	5	${52}$	27	14	9	296

#### SCHEDULE No. 19.

RETURN OF TEMPERATURE OF WATER FOR YEAR 1905, TAKEN AT THE SHORE CRIB AND THE CITY HALL TAP.

		Degrees Fahrenheit.								
Month.	s	hore Crib	).	City	City Hall Tap.					
	Highest.	Lowest.	Average.	Highest.	Lowest.	Average.				
January	36	33	34.32	42	36	37.80				
February	36	33	33.85	38	33	33.95				
March	36	33	33.87	38	33	34.11				
April	37	35	36	45	35	40.91				
May	41	36	39.12	45	42	43.73				
June	46	40	41,60	48	42	44.88				
July	52	40	44.32	54	44	47.88				
August		40	55.38	56	48	52.09				
September		39	52.03							
October		40	45.09							
November		37	40.60	47	41	43.50				
December		36	38.38	43	40	41.48				
Average for Year		36.83	41.21							

### Analysis of Temperature.

#### Shore Crib.

The highest on September 19th, 66 deg.; the lowest on January 16th, 33 deg.; the highest average in August, 55.38 deg.; the lowest average in February, 33.85 deg.

City Hall Tap.

The highest recorded on August 14th, 56 deg.; the lowest recorded February 23rd, 33 deg.; the highest average in August, 52.09 deg.; the lowest average in February, 33.95 deg.

Note.—This record was not kept from August 15th to November 1st.

9--Ea

SCHEDULE No. 20. Maintenance of Distribution, 1965.

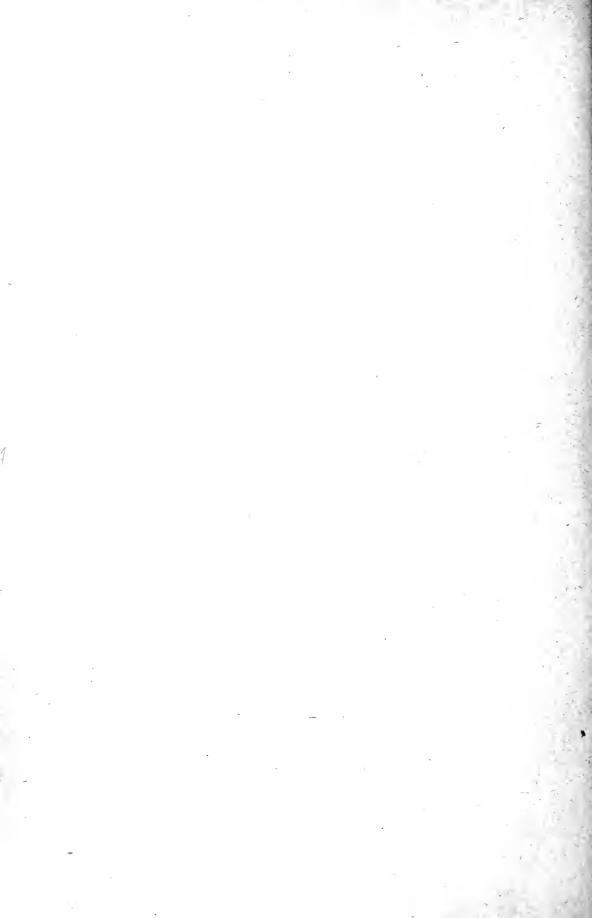
-shiz	tins of salfaw	123 223 223 203 203 325 325 326 443 643 643 643 643 643 643 643 643 64
posou	1 89917198	
	.doni-68	
Ë	. iləni- <b>12</b> . iləni-08	=======================================
18	20 meh.	
=	12-nich.	4466831-1-084 5
Leaks on Mains	.doni-01	
3	8-inch.	
Le	l 6-meh.	ж <del>аа г</del> дегода 16
	4-inch.	: ' : : : : : : : : : !
	I-inch.	:: • : : : : : : = = :   ~
s C	.dəni-‡	
Services Taken Out.	, fe-inch,	:::==== :::==   1.0
z Še	- <del>1</del> -111ch.	<u> 교회보증과 · 문년</u> -
=	ह ग्राच्या	:
	E.	85 111 121 131 132 133 133 134 135 135 135 135 135 135 135 135
	Om.	로 # # # # # # # # # # # # # # # # # # #
	Cleaned Out.	25   25   25   25   25   25   25   25
House Services.	Dug Out.	1055 1109 1101 101 214 229 280 280 280 280 280 129 129 145 145 145 145 145 145 145 145 145 145
ž	·3n()	361 22 23 24 25 25 25 25 25 25 25 25 25 25 25 25 25
Home H	Reports.	25 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
1.	Asise   False	201 201 201 201 201 201 201 201 201 201
	asing	145 175 175 175 175 175 175 175 175 175 17
	Геякв.	== 0.0000000000000000000000000000000000
		January February March April April Junay Juny August September November December Total

SCHEDULE No. 22.

STATEMENT OF QUANTITY OF WATER PUMPED, AND THE COST OF PUMPING, FIGURED ON COAL, WAGES, MAINTENANCE AND INTEREST AND SINKING FUND.

MAIN PUMPING STATION.

Total Fuel Pounds.	el Cost of	Jo 15	Wages.	1	Total Cost, including Re- puirs, Fuel, Wages, etc. Main Pump, Station.	Enel. Cost per 1,000 Galls.	Fuel and Wages. Cost per 1,000 Galls.	Fuel, Wages and Mainten'ce Cost per 1,000Galls.	ing Expenses, ing Expenses, including Collection of Revenue, including re Pumping.	Interest and Sinking Fund	Total Cost,in-cluding Fuel, Total Cost cluding Fuel, Total Cost Sinking Fund tenance, In-Galls. on tenest and same.	Total Cost per 1,000 Galls. on same.
	ij	ပ်	T.	:	ວ່ ∰-	Cents.	Cents.	Cents.	ં	ပ် ##	್ರೆ	Cents.
:		:		:			:	:				:
		:		:		:		:			:	
				:								:
				. :								
5,003,262 17,156		4	5,838	133	25,886 05	1.23	1.65	1.85				
			0,447			1.21	1.60	1.85				
٠.			33.			_	1.26	1.40				
	-	31	7.140		25,246 50		1.51	1.78				
0,872,211 19,313	::		7,140	3	29,827 38		1.63	1.85				
	£.,		7,140				1.98	e1.5				
	=		1,173				9.03	32.51				
071,08 555,550 170	$\supset$	3	8.819		_	. ,	1.84	9.69				
	Ç.	80	10,025	31	_		1.89	2.15				
	100	 	10,84g	<del>-</del>	_	_	1:3	1.90	117,733 27	_	268,336	99.7
	<b>-</b> :		15,017	ŝ	• •		1.64	1.84		151,614 (0)	256,144	71
_	₹.		14,814				1.36	1.58		_	271,993	
٠.	_		16,968	<u>;</u>	76,597 16	1.13	1.51	<u>:</u>	_	163,337	293,512	
	_		19,043	X			1.58	-88. -		171, 197	206,828	
			S, 192	G:			1:21	1.81		181	342,671	8. 151.00
	••	£.	17.87.13		83,136 12		1.44	1.58		226,273	394,906	
	2.1		22,556			_	F7.1	1.36		226,273	409,127	
	4 . 6		21,645		103,202, 91		1.39	1.54	_	992, 626	•	
			27,018				1.37	9:1		224, 732	413,213	
			25,359		-		31	1.57	183,975 23	557, 135	102,307	6.50
			65 65 65 65 65		_	•	1.01	1.13		224, 732	373,640	
		Ē.	22,529	11	_		6.70	0.85	_	225,545	570,754	
			25,933				6.73	ずえご	141,954 80	•	367,499	
		91 21	23,983				0.71	0.74			368,754	
_			24,770		71,279 65		0,65	06.0	162,185 - 19		384,685	
24,148,565 38,668	-		27,314	86	80,339 85		08.0	0.33		222,749 00	392,573	4.86
	9		28, 295				0.81	0.94				
23,769,930, 37,409	=	9 30	28,170	36			0.82	0.93		91	398,098	
30,260,615 54,275	1-		31,405		93,591 55		0.98	1.07		•	424,847	
	7		30,680		_		0.91	1.03	_	252,739	470,314	
	-	_	30,017				00.0	0 0		001010	130 023	



#### SCHEDULE No. 21.

36-	inch	2
30	• •	
24	6.6	6
20	4.6	2
16	4.6	–
12		
10	6.4	3
8	6.6	2
6	6.6	
4	6.6	4
3		<u>-</u>
		Total 184 of all sizes
The cost	of re	pairing these leaks (exclusive of asphalt pavement repairs) was.
La	bour	·\$1,271 77
Ma	iteri	al

Average number of leaks per mile of distribution		0.64
Average cost per leak (labor and material)		7.62
Average cost per mile	9	34.90

# ACCOUNTANT'S STATEMENT of EXPENDITURE FOR 1905

ACCOUNTS.	S	c.	ŝ	c.	8	е.
GENERAL WORKS.				-		
WENERAL WORKS.		- 1				
Asphalt cleaning	26,781					
Asphalt flushing	6,731					
Bridges, repairs and maintenance of	7,889 $6,489$					
Cleaning gullies	26,781					
General purpose	18,747			1		
Permanent crossings	2,526					
Roadways	16,719					
Sidewalks.	9,835	29				
Snow, cleaning off sidewalks	9,854					
Street eleaning, snow	29,346					
Street cleaning	55,553					
Street watering (including water)	38,669					
Scavenging	129,362 $391$					
Stone and wooden curbs  Street and house numbering	$\frac{351}{762}$					
Weed cutting	1,051					
Private drains.	46,274					
	433,769	78				
Less amounts paid to City Treasurer for		•				
private drains	47,832	72				
P			385,937	06		
SPECIAL WORKS.						
Asphalt repairs	22,573	28				
Concrete walk n. s. Gerrard, bridge to						
Broadview	562	15				
Danforth Road, repairs	1,871	10				
Dog trapping	176	80				
Dredging slips	5,656	4				
Electrical blue print machine		18				
Erection pounds, east'n and nort'n stables		05				
Esplanade and City docks, wharves, etc	$\frac{3,652}{2,448}$					
Exhibition Park, sidewalks Exhibition Park sewer		84				
Express and cabmen's shelter		16				
Fence and sheds at eastern stables	1	09				
Free bathing	2,486					
				0.0		
Carried forward	41,043	17	385,937	06		

ACCOUNTS.	ŝ	с.	at.	c.	S	c.
Brought forward	41.040					
Harbor cribwork.	41,043 $605$		385,937	06		
Intersection, Queen and Yonge Streets.	1,019					
Jarvis Street, sewer extension	4,707					
Life saving	777					
Lumbervale Avenne, opening	1,571					
New carts and harness	482					
New hydraulic dredge	15,400	00		1		
New public lavatories	4,054	06				
New sheds, Eastern stables	580	57				
New shops, Western stables	34	10				
Painting fence and sheds, Western yard.		65		- 1		
Piper Street extension	27,339					
Public conveniences.	284					
Purchase of horse feed.	2,990					
of burners		98				
of horses	7,210					
Renewing retaining walls, Yonge Street,	17,734	0.4				
opposite old Severn Brewery	838	27				
Rentals	931			l		
Repairs to jetry, Ashbridge's Bay	426			1		
Sewage disposal	1,578					
Sheds at new Northern stables	, -	70				
Stone for House of Industry	684					
Street railway matters	6,885					
Track allowance, reconstruction	15,431	31		}		
Transportation street sweepings to Island	545	46				
Tug "National" maintenance	565	74				
Western destructor	12,203					
Western yard, roof	864					
Woodbine district, sewage system	1.300	$\Theta$				
ISLAND COMMITTEE.			168,235	38		
ISLAND COMMITTEE.						
Cleaning weeds from lagoons	1,289	10		- 1		
Grading and cleaning streets	147					
Island destructor	809					
Island Park wharf repairs, west side	944					
Island pumping station, new boiler found-						
ations	666	60				
Island scavenging	726					
Island water works	3,294			1		
Repairing bicycle path	198					
Repairs to bridges	33			į		
Davidas v. la kanak .	316	63		1		
Repairs to destructor						
Repairs to destructor	153					
Repairs to destructor						

ACCOUNTS.	Ş	c.	\$ c. 8 c.
Brought forward	9,414 219		554,172 44
Ward's wharf repairs	3	$\frac{68}{82}$	10,486-80
Sewers            Pavements            Sidewalks (wooden)         5,218 56			
Sidewalks (permanent) 152,619 12 Railway pavements	157,837		583,071-58
Bridges, gradings, openings, etc			$ \begin{array}{c ccccc} 4,172 & 11 \\ 75,435 & 88 \\ \hline & & & \\ 1,227,338 & 81 \end{array} $

Respectfully submitted.

## W. McCARTNEY, Accountant.

WATER WORKS BRANCH.			
Maintenance.			
Maintenance and distribution.  Main Pumping Station.  Coal.  Meter and machine and blacksmith's shop Hydrants and valves.  Store House Reservoir High Level Station Cartage Miscellaneous Inspection and examination of conduit.	36,975 72 39,759 63 48,408 99 14,332 95 5,569 36 1,895 70 5,739 35 11,953 07 6,447 29 229 84 165 00	171,476 90	
Gonstruction.			
House services	59,291 60		
services	12,621 20	46,670-40	
	-	218,147 30,	

ACCOUNTS.	Ş c.	\$ e.	**	c.
Brought forward		218,147 30		
Renewals.				
House services	6,339 30 3,791 <b>0</b> 9			
	10,130 39			
Less amount paid Treasurer: Scrap iron and brass 107-52 Sundry extensions of old mains 313-20	420 72	9,709-67		
SPECIAL WORKS.				
New engine, main pumping station Tunnel and connections	75,568 94 3,698 04			
Bathurst St., 36 in. main, College to Reservoir	88,902 23 31,183 08			
Spadina Ave. e. s., 12 in. fire main, Adelaide to 390 ft. north	174 89 14 58			
ft. south Front St., 24 in. main, Church to Sumach	43,833 $65$			
New 6 ft, steel conduit	83,183 24, 8,650 87			
St Garage St. 16 in, main, Dupout to	1,426 33			
Bloor Queen St., 16 in. main, Sumach to Don.	3,910 22			
Don to Broadview	4,079 97			
12 in. " Dundas to Glad-	140-84			
Strachan Ave., 12 in. main, Wellington to Exhibition	103 28			
Gerrard	04 24			
Sterling Rd., 12 m. main.  Poplar Plains Rd., 12 in. main, St. Clair	2,496 09			
to High Level Station	11,699 01			
Jefferson Ave., 6 in. fire main, Liberty to 500 ft. south	157 000			
to 750 ft. east	0.00 10			
Mincing Lane, 6 in. fire main			7	

ACCOUNTS.	T)	c.	\$ c.	\$ c.
D. J. J.				
Brought forward	355,105	80	227,856 97	
dock and Spadina Ave	116	00		
College	13,384	89		
New engine, High Level Station	-4,194			
High pressure fire service	12,361	75		
			$385,163 \ 37$	
Revenue mains			$31,377 \ 71$	
Personal and departmental accounts			17,982 - 06	
	ĺ			$662,380 \cdot 11$

Respectfully submitted.

W. McCARTNEY,

Accountant.









TA Toronto. Dept. of Public 27 Works T7A2 Report of the city

1905 engineer

Scria,s

Engineering

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